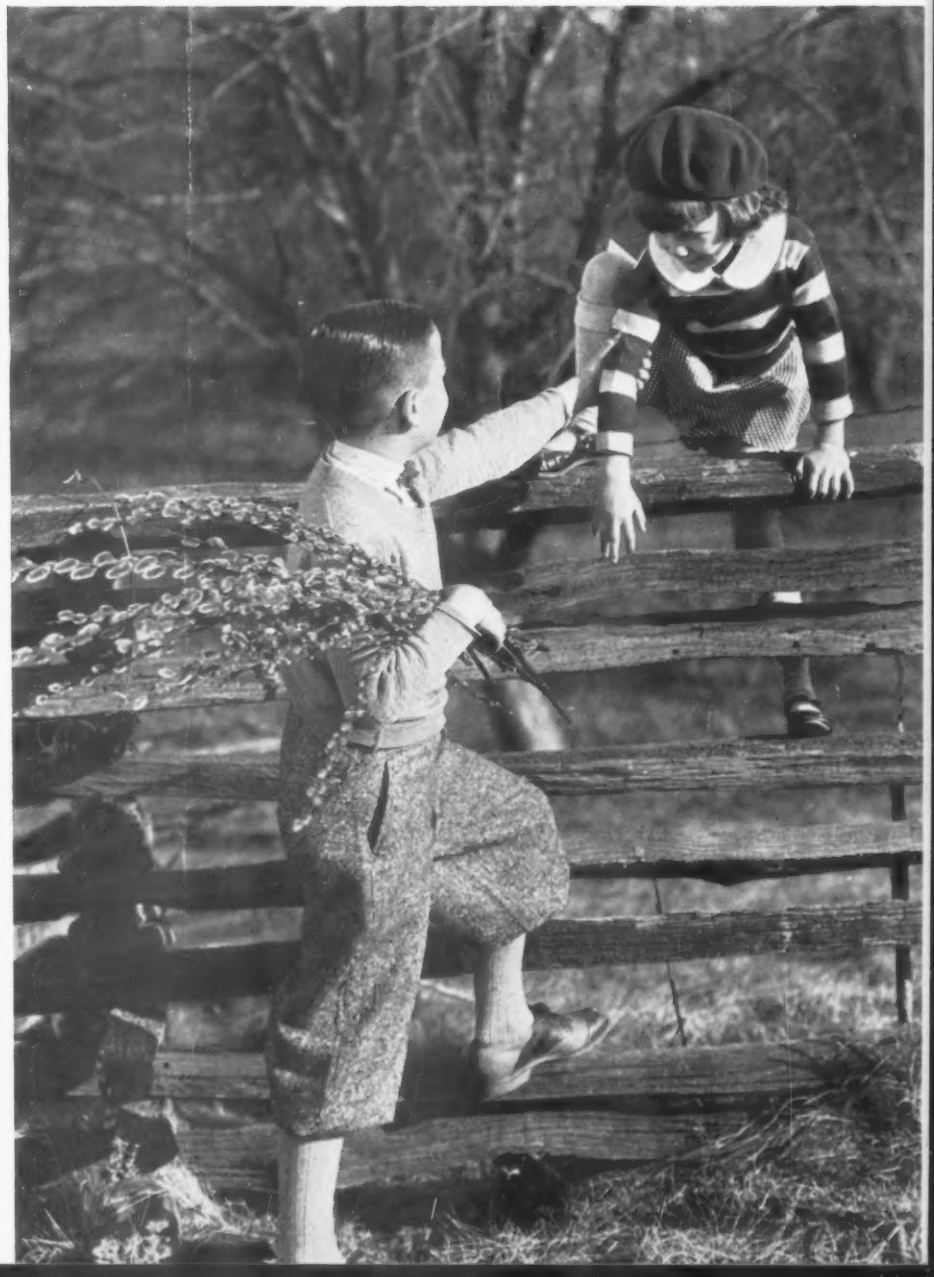
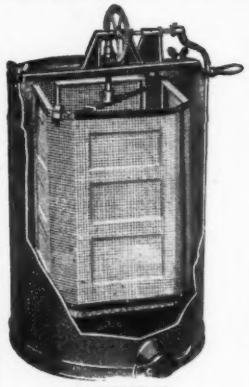
American Bee Journal



February
1936

THE BEST AND MOST POPULAR SUPPLIES EVER OFFERED *Priced Right*

DOUBLE DUTY EXTRACTORS THAT EXTRACT COMBS and DRY CAPPINGS



PATENTED

The new No. 12 takes Three Jumbo Frames or Six Shallow Frames at a loading. The new No 14 (illustrated) takes Four Standard Hoffman Frames or Eight Half Depth Frames at a time The No. 10 takes Three Standard Frames or Six Half Depth Frames.

Almost impossible to break a comb while extracting. Fast - efficient - the *Ideal* extractor for the average beekeeper. Crank is on the side for easy turning.

NO MAKESHIFT TO DRY CAPPINGS—THIS DOES IT QUICKLY AND RIGHT

Loosen two wing nuts and entire top lifts off to easily pour in cappings. Whirling a few minutes dries them. Reel basket is quickly lifted out to dump dried cappings and for easy cleaning. Ball bearing reel, heavily built throughout, adjustable honey gates.

Double Duty feature alone is worth half the price and found only on these extractors. Write for complete extractor catalog.

Size	Pockets	Weight	Price
No. 10—3-Frame or 6-Frame	9⅝"x16"	40 lbs.	$13.25
No. 12—3-Frame or 6-Frame	12"x16"	48 lbs.	14.75
No. 14—4-Frame or 8-Frame	9⅝"x16"	48 lbs.	14.25

NOTE THESE LOW PRICES

24-Frame Radials	$78.00	Steam Heated Knives, 10½"	$4.25
2-Frame Reversibles	21.00	2-Gal. Steam Boiler	2.50
Bee Smokers, 3½"x7", tin	.95	Hive Tools—8", 40c—10"	.50
8½" Plain Uncapping Knife	1.00	Bee Escapes, 11c ea. or 12 for	1.15
10½" Pln. Uncapping Knife	1.25	Wire Embedders	.20

ASK YOUR DEALER—If he cannot supply Standard Products, write us for prompt shipment or catalog.

60 Years of Service Your Guarantee of Quality.

THE STANDARD CHURN COMPANY WAPAKONETA, OHIO

Treat Yourself to the Best with

KNIGHT'S LEATHER COLORED ITALIAN BEES and QUEENS

Accredited and Certified by Agricultural Department of Alabama

They are the best honey gatherers, the best winterers and gentle. All queens guaranteed mated pure. Guaranteed to please you and guaranteed not to supersede soon after introducing.

2-lb. Packages including Young Queen, $2.45
3-lb. Packages including Young Queen, 3.15
4-lb. Packages including Young Queen, 3.85
Queenless Packages, deduct 75c

PARCEL POST shipments: Add 10c plus postage. Write for delivered prices

QUEENS, GUARANTEED MATED PURE, SELECT, 75c. (No charge for clipping)

Shipments on the day you name. 15% discount to dealers. Full weight guaranteed with young bees.

Shipping begins about April 1.

JASPER KNIGHT, Hayneville, Ala.

JUST OUT!

Our New Bee Supply Catalog for 1936

❖

—New in appearance and pleasing to look at. But more important is what you will find on the inside.

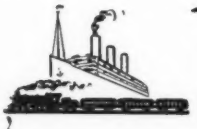
—This Buyers' Guide for Beekeepers is devoted to listing good quality products at reasonable prices, and to guaranteeing safe and prompt delivery of your orders.

—It is not a bit too early for you to prepare for the 1936 season. You will find no time for planning next spring and a hurried preparation may be a costly one.

—Write us if your copy of our catalog has not yet arrived. It will be mailed to you at once, free.

❖

AUGUST LOTZ COMPANY
BOYD, WISCONSIN



Where Service is a Fact not a Promise

Italian Package Bees and Queens Shipped The Day You Want Them

Better Service and Higher Grade Packages and Queens

The demand for package bees promises to be the greatest in its history, so we advise you to place your order early. We have made preparations to handle an increased volume of business and are ready to give you better service. Special night express insures few losses.

Untested queens, each	$ .75
2-lb package with queen	2.45
3-lb. package with queen	3.15
Each added pound bees	.70

For queenless packages deduct price of queen.

NUCLEI

1-frame—2 lbs. bees with queen	$2.45
2-frame—2 lbs. bees with queen	2.85

15% discount to dealers
Health certificate with each shipment

W. O. Gibbs Company
BROOKFIELD, GEORGIA
Box 81

SERVICE

Package Bees Queens

When you book your order for bees you want them on time, not two or three weeks late. We are in a position to furnish ***on time, any number*** of packages to one thousand a day. No order too small or too large to receive prompt and careful attention. All we ask is that you let us book them far enough ahead so that they can be shipped the day you want them.

QUALITY

Three-banded Italians are conceded to be the best general purpose bee in America. When we find a better one, we will produce them. Ours are descendants of the famous Dr. Miller strain and we are continually endeavoring to improve the quality. Ask anyone who has tried them, you will find them in every state and province.

Write for circular.

Now booking orders at the following prices:

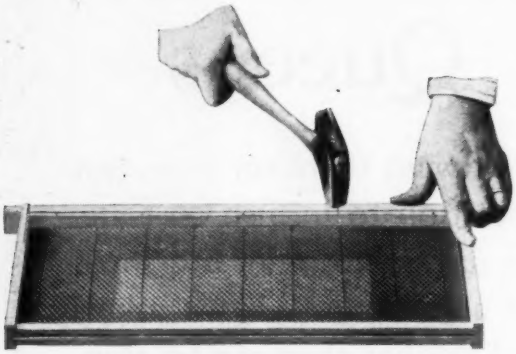
Two-pound Packages with Queens . . $2.45 each
Three-pound Packages with Queens . 3.15 each
Untested Italian Queens at . . . . . .75 each

15% Discount to Dealers.

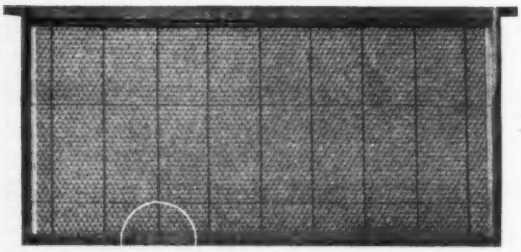
Cypress Hives Last Longer. Write for Catalog.

THE STOVER APIARIES :: MAYHEW, MISS.

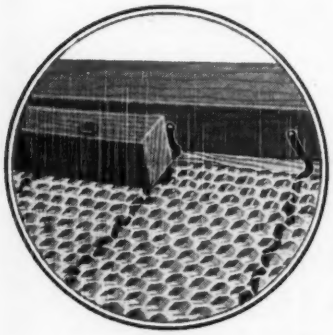
Meet Today's Needs With Dadant's Crimp-Wired Foundation



With a handy hammer and a board under each sheet to raise the foundation to frame level, Dadant's Crimp-wired Foundation goes in place quickly and easily, and requires little skill. It is real time saving equipment.



Even under conditions of severe handling, two cross wires are all that are necessary to keep Crimp-wired Foundation in the center of your frame. These wires may be put in with speed and require little care.



Dadant's Foundations are made only of pure beeswax, just as your bees make it. Safeguard both your honey and your wax with an absolutely pure product.

1. It Costs Less to Assemble

From the first nail to the finished job, the time of each operation is cut down for you when you use Dadant's Crimp-Wired Foundation.

Quick, Easy Work

When you lay a sheet of Crimp-wired Foundation in a Lewis Slotted Bottom Bar Frame, the bottom of the sheet slips into the slot of the bottom bar exactly and rapidly. When the top edge, with its crimp wires, lays back of the top bar wedge, the nails go in quickly and securely.

Less Labor

The result, of course, is a greater number of frames set up in a given period; cost per frame, therefore, reduced to the lowest possible point.

Stands Abuse

The resulting combination of frame and foundation is a sturdy piece of equipment which will stand abuse, carry around from place to place conveniently in any kind of container.

● ●

When You Plan Your Foundation Buying Consider What This Means to You.

DADANT & SONS, Hamilton, Ill.

DADANT'S FOUNDATION
CHOICE OF EXPERT BEEKEEPERS

The
AMERICAN BEE JOURNAL

Established by Samuel Wagner in 1861

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The Oldest Bee Journal in the English Language.

FEBRUARY, 1936

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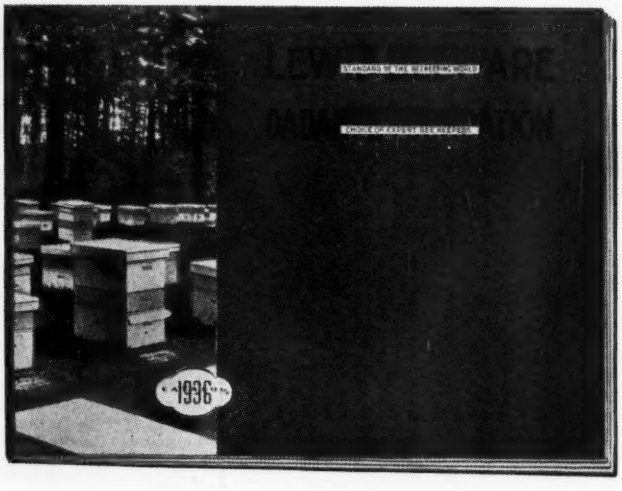
In the United States, Canada and Mexico, $1 a year; two years $1.50; three years $2. Foreign, $1.25 a year; two years $2; three years $2.75. Subscription stopped at expiration date on wrapper.

We Could Not—



Here is the dressed-up 1936 Beeware catalog. It contains much to help you. Be sure you get a copy soon.

Here is one dealer's warehouse all set for 1936. Ask us for your nearest dealer's name and a free copy of "A Hobby That Pays."

IMPROVE THE PRODUCT, so we improved the catalog. The 1936 Beeware catalog is a complete change from any bee supply catalog you have seen. Every honey producer will want a copy. If you do not receive one by February 1, send us a post card so we do not unintentionally overlook you.

With the assistance of an expert layout man, the whole style has been changed from cover to cover. Much more information about the use of the product and about honey production has been included in a complete rewrite of the copy. A new style of type is used that is easier to read. A change in the style of binding and a complete index make it easy to find just what you want. You will like the color combinations and we believe you will agree, when you see it, that this Lewis catalog sets a new and needed style in bee supply catalogs.

Some 1936 Beeware prices are lower. Rising costs, brought about by increasingly better times, make it unlikely that you will buy Lewis Beeware again at these low prices for a long time to come. Honey prices were much better in 1935 and no fall for a long time has shown better prospects for the coming year. Plan your 1936 operations now. Send us a list of items you will need and let us quote without obligation to you. Get ready for a better 1936 right now!

HONESTLY MADE——HONESTLY SOLD——HONESTLY PRICED

LEWIS BEEWARE

STANDARD OF THE BEEKEEPING WORLD

G. B. LEWIS COMPANY

Established 1863

HOME OFFICE AND WORKS: WATERTOWN, WISCONSIN

BRANCHES: ALBANY, N. Y. LYNCHBURG, VA. WHEELING, W. VA. SIOUX CITY, IOWA

AMERICAN BEE JOURNAL

Vol. LXXVI—No. 2 Hamilton, Illinois, February, 1936 Monthly, $1.00 a Year

Servicing Grocery Stores With Honey

By Leroy Churchman,
Kansas.

This is marketing in the modern trend, the way that is accepted and much easier than the old peddling methods. It gives a dignity to honey and puts real push behind its movement.

For many years, we depended on wholesale houses to market our honey and found it to be unsatisfactory. Most generally wholesale houses have something else they would rather push than honey and so they often keep the honey in storage until it granulates, when it is sold at a loss to move it.

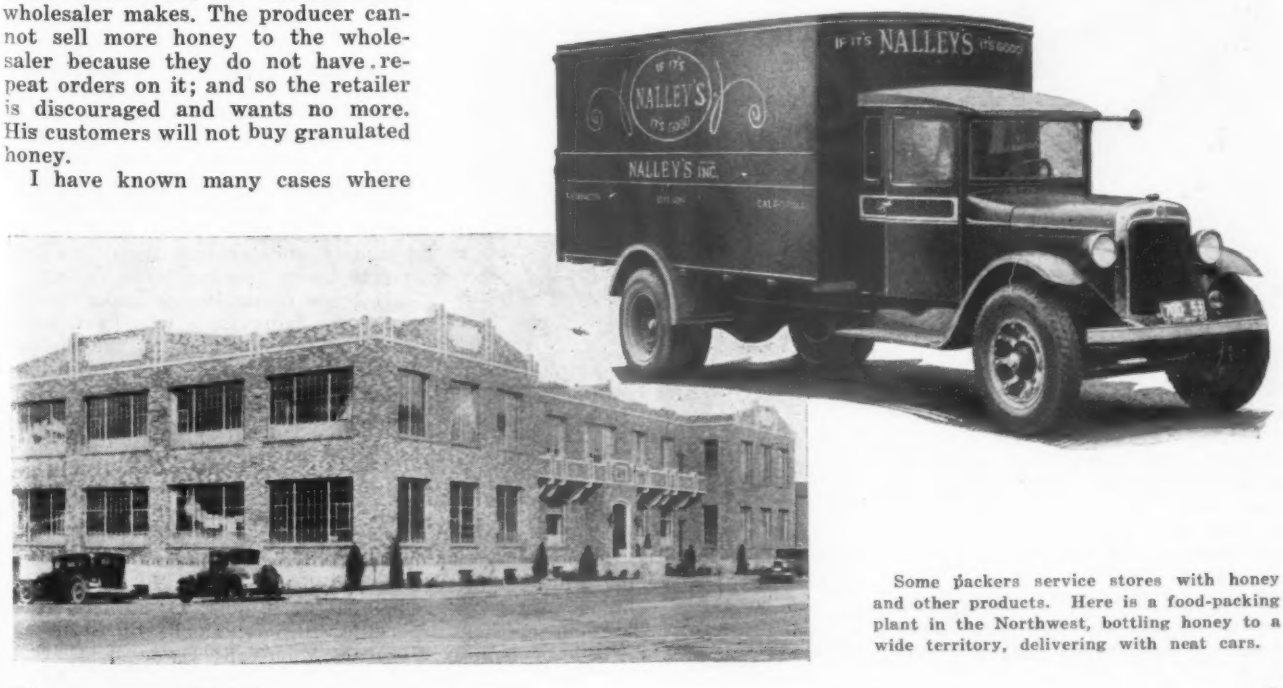
So the beekeeper, the wholesaler, the retailer and the consumer all must suffer for the mistake the wholesaler makes. The producer cannot sell more honey to the wholesaler because they do not have repeat orders on it; and so the retailer is discouraged and wants no more. His customers will not buy granulated honey.

I have known many cases where wholesale houses have sent out to retailers full cases of jar honey that was granulated solid and as a result have probably paralyzed honey trade for a year or more.

After trying to dispose of our crops through wholesale houses for several years, we decided we must find a better method of getting our honey to the consumer.

About this time, servicing retail stores with nearly all food products became popular so we decided to give it a trial on honey and found it to be a success from the start.

We picked Wichita, Kansas, a city of 400 retail grocery stores, to give this plan a trial and located there in March, 1932. We planned to make Wichita our headquarters and to service all the neighboring towns within a radius of 75 miles. At first



Some packers service stores with honey and other products. Here is a food-packing plant in the Northwest, bottling honey to a wide territory, delivering with neat cars.

Sears & Roebuck, Seattle store, often puts on a display of honey like this

A Seattle market display. These two displays show what service cooperation with the grocer will do for honey advertising

we only sold to a few stores. We met with quite a few problems and difficulties. Some merchants obliged to buy from a wholesale house that was carrying them thirty days or more on groceries and others hated to break away from some brand they had been selling and the majority of them claimed that they could not sell honey at all.

We found the latter to be true for they either did not have any honey to sell or what honey they did have was granulated and probably had been for a year or more.

Our first and biggest job was to pick up and dispose of over two tons of honey which was granulated in jars scattered over Wichita and vicinity.

The honey was picked up, liquefied and sold to bakeries at six cents a pound. The merchants were asking as high as thirty cents a pound for it on their shelves, but some of them claimed they had not sold a pound of honey for a year and that was probably the reason for most of it was amber honey ranging from heartsease to something worse.

This was all replaced with our finest clover honey packed in new modernistic jars with attractive labels.

This took much work and was rather expensive at first but later proved to be fine advertising for honey began to move and the news was spread from one merchant to another so within a year, we were selling practically every independent store in the territory.

We sold them any size from a 5-ounce jar to a 60-pound can and sold them any number they chose. We covered the territory every fifteen days and no one needed to stock up heavy unless he chose to do so.

In this way, the honey was always kept liquefied in nice clean bright jars. Any time it began to granulate, we exchanged it for new liquid honey.

We learned that you may as well ask a customer to take home a bottle of milk to churn butter as to ask them to take home a jar of granulated honey and liquefy it. They won't take the trouble so the honey stands on the shelf.

We have also learned that honey must be on the market not only during the winter months but every month of the year. We supply our customers just as regularly in summer as in winter and find it as essential.

This method of marketing honey does not only enable us to increase our sales 300 per cent, but also enabled us to sell the crop of several other large producers. We find the method 100 per cent successful and would not think of trying to market honey in the old way.

Forty Faithful Fellows

Last month American Honey Institute paid tribute to fifteen persons and two state associations for their faithful support of our program since the first Honor Roll was published. The 1935 Honor Roll is now complete and we find these familiar names again "among those present."

Now we would like to make known the forty individuals who have been listed on all but one of the Honor Rolls and to take this opportunity to honorably mention and to extend our thanks for the fine cooperation given by J. M. Cutts & Sons, Montgomery, Alabama; Charles A. Brown, Saugus, California; H. M. Krebs, Sacramento, California; Connecticut State Beekeepers Ass'n.; C. Holm, Genoa, Illinois; E. A. Meineke, Arlington Heights, Illinois; Dr. V. G. Milum, Champaign, Illinois; C. F. Rife, Naperville, Illinois; H. P. Christensen Decatur, Michigan; Owen L. Clark,

St. Clair, Michigan; M. T. East, Traverse City, Michigan; C. E. Glover, Kalamazoo, Michigan; Frank Janeschek, Middleville, Michigan; Howard Potter, Jr., Ithaca, Michigan; Arthur Rattray, Almont, Michigan; Carl J. Snover, Grand Rapids, Michigan; Paul S. Johnson, Calloway, Minnesota; O. S. Bare, Lincoln, Nebraska; J. H. Lutes, Stapleton, Nebraska; Richard Barclay, Riverton, New Jersey; A. Gordon Dye, Rochester, New York; Empire State Honey Producers' Association; Howard Grimble, Holcomb, New York; Emil Gutekunst, Colden, New York; F. J. Jones, Sauquoit, New York; F. W. Lesser, Fayetteville, New York; Louise MacMullen (now Mrs. Lyman), Greenwich, New York; George M. Sowerby, Cato, New York; F. Hahman, Altoona, Pennsylvania; Ohio State Beekeepers' Association; F. D. Manchester, Middlebury, Vermont; Charles Mraz, Middlebury, Vermont; George Harrison, Purcellville, Virginia; S. P. Elliott, Menomonie, Wisconsin; James Gwin, Madison, Wisconsin; V. G. Howard, Milwaukee, Wisconsin; Charles N. Roy, Sparta, Wisconsin; Klem Wilkas, Dexterville, Wisconsin; Wisconsin State Beekeepers' Association; George Krause, Riverton, Wyoming.

Each of these memberships was renewed this past year and are listed on the 1935 Honor Roll which is appearing in this bee journal and which will be available in the annual report soon after the first of February.

Filtered Honey

By W. E. Lindsay, Colorado.

Apparently we are coming to filtered honey. Honey producers would not like to see their delectable product put on the market in a denatured form like commercial sucrose or common sugar. In any event, you will have to go with the trend of market demand.

It would be interesting to know what is taken out by filtering. Of course, filtering would take out the fine wax particles and pollen which are always in the honey from the extractor and which come to the top if it stands long enough, a process which is not settling, as commonly termed, but rising.

We may suppose that the filtering will remove the darkened color which would enhance its appearance. But would it also remove the floral flavor and whatever vitamins may be in honey?

The market nowadays demands a product that is pretty bright, clear, attractive and will sacrifice quality to get it. Perhaps then we will have to filter to meet the market demand. It will be not so much we, the beemen, as the bottler or wholesaler. Perhaps if the processor or bottler can filter and make a beautiful product, he will demand more of our honey.

If the retailer can sell it better, the producer will have a better market. Appearance sells most everything these days. The old timers liked their honey amber and looked with suspicion on white honey as being adulterated. Wild honey was of various shades of amber. This set the standard for color in those days. So it may be that the taste of the buying public will run to filtered honey.

If the public is satisfied, maybe we ought not to kick. How rich the flavor is just when we are uncapping; and it has always seemed to me that the more extracted honey is handled, the less of the floral flavor it has and the sooner it granulates. This flavor seems easily lost and must be very volatile. Air bubbles form when we are filling pails and cans which lie on top after the honey granulates. This would disappear in filtering and likely not form again, as a filter running slowly would be less likely to form froth.

It might be possible that honey once filtered would not so readily granulate again. If some process could be evolved to eliminate granulation without injuring quality, what a step forward it would be.

All in all, if too many elements were taken out, the product would not be "honey" as we used to know it. Since beginning this, I have read the article by L. E. Milkey on "Honey Filtering" in the November Journal. It is enlightening on these points. Beekeeping must progress as every industry must do. What if beekeeping had stood still from the time of Moses Quinby? Most of the great progress has been made since his day.

The Wrong "Comb"

We slipped away one day last week for a bit of fishing—not wanting to tell our better half where we had been when we were asked, we replied: Oh, just slipped away to a nearby farm to get a little honey.

To our utter amazement she replied: Well, I can see very well that you were successful. The "little honey" left her comb in the rear seat of the car.

(Clipping from Alfred Pering, Florida.)

Illinois Does Have Pretty Ones

Adam Bodenshatz, Lemont, at least has one pretty bee yard. Here it is. Adam lives between Joliet and Chicago, sort of between the devil and the deep sea. Cook county may be notorious in many other ways, but it is Illinois' beekeeping Eldorado and few there can boast a better layout than Adam's.

Next National to Texas

Already plans are under way for the next conventions of the Southern States Conference, American Honey Institute and the Honey Producers' League which are to be held in Texas. Texas is celebrating her centennial in 1936 and there will be plenty to do and see for those who take advantage of the special inducements to make the trip.

Once an independent republic, Texas has a colorful history and many spots of historic interest. We may expect to hear much concerning the attractions of our largest, and her citizens insist "our greatest" state, in the months that pass prior to the assembling of the beemen in Dallas or San Antonio. No matter where the convention is held the visitors will want to visit both cities. The exposition is to be held at Dallas but San Antonio has attractions which can hardly be overlooked by any visitor.

At one time there were probably more thousand colony beemen in Texas than in any other similar area in the world. Of late the clearing of large areas of native trees has resulted in scattering these men to distant regions or reducing the size of their operations until Texas no longer holds first place in commercial honey production. There are still many good beekeepers within her borders and some of the most interesting honey plants to be found in America.

If the conventions are held in San Antonio every beekeeper will want to visit the State Apicultural Laboratory a few miles out. H. B. Parks, the man in charge, is one of the most interesting figures in all beedom and it is worth a trip to Texas just to have a visit with him and his unusual laboratory.

Those who went to Valdosta in 1934 will want to make another trip to the South in 1936, and those who missed the Georgia meeting will by all means want to go to Texas. There is every reason to expect a large attendance and a wonderful meeting.

What Price Honey?

There is a constant discussion of the price of honey with argument as to the reason for the continued low figure for which it sells. It is the belief of this writer that any restriction of output would have very little effect in raising prices. There are too many other sweets in the market for the public to pay a high price. There is but little prospect for much higher honey prices except in connection with a generally higher price level. In that case the relative purchasing value would remain substantially the same.

We live in a time of fierce competition for the consumer's dollar and price largely determines the volume of sales of any commodity. The northern market gardeners in many cases are losing their markets to products raised in the South, a thousand miles distant, because the southern shipper is able to produce his vegetables at lower cost and undersell them in the local market.

Every product must face the competition of some efficiently produced substitute and to hold its place must sell at a comparative price. Those beekeepers who are able to secure large yields at low overhead costs are making money. To compensate for low prices it is necessary to reduce costs of production or increase the volume, or both. In the days of 25-cent honey a beekeeper with a good location could make a living with a hundred colonies. It requires nearer a thousand colonies now to maintain the same relative living standard. We have come to demand many new things, such as automobiles, radios and electric equipment, in the home. As the price for our honey has declined we have raised our standard of living, thus requiring a greatly increased output.

This higher standard of living is one of the reasons for the great pressure for lower prices. There is a constant struggle to make modest incomes reach to cover added requirements for growing families. The beekeeper is powerless to change conditions. He must sell at the price the consumer will pay.

Heavier Yields at Higher Levels

In the December "Bee World" Rev. J. Beveridge states that pure heather (Calluna) honey is to be secured in Great Britain only at altitudes above a thousand feet. He indicates that heather may yield at lower levels, but that the honey is mixed with that of other sources.

There is room for much careful investigation of the behavior of the honey plants in the various life zones and of the influence of such factors as altitude on the behavior of the plant in nectar secretion.

There are indications that many of the best honey-producing locations on our own North Pacific Coast are unoccupied and that beemen are getting much smaller crops than they might get at higher altitudes.

Some locations apparently are unappreciated and others are unused because of the difficulty of access for lack of roads in the mountain areas. Some of the false heathers (**Cassiope and Phyllodoce**), which are cousins of the heather of Europe, occupy large areas in the Cascade and Olympic Mountains and in similar areas northward to Alaska. They are largely found in unsettled regions, but there is reason to believe that large crops of honey could be secured from them.

J. H. Merrill once called attention to the fact that alfalfa yields nectar freely in all parts of Kansas above a thousand feet elevation. It may be that the increased yield at higher levels is because of the greater temperature changes between day and night, but certain it is that much more dependable honey crops are secured.

California beekeepers have long recognized the fact that certain plants yield much better in the mountains than in the valleys. Perhaps that may not apply to all, but it is important to the beekeeper to know to what plants it does apply and the range of altitude at which maximum yields are secured. If a few hundred feet of elevation doubles the crop the beekeeper may well search for the more favorable location, especially if he lives in the mountains where higher altitudes are within easy reach.

The Modified Dadant Hive

In the January issue of this magazine, George Harrison advocates further modification of the Dadant hive by reducing the brood chamber to nine, instead of eleven frames, spaced one and one-half inches. This suggests that a bit of history may be of interest. The present Modified Dadant came about as a result of an argument between the senior editor, C. P. Dadant, and our present field editor, Frank C. Pellett, who at that time was state apiarist of Iowa.

Mr. Dadant was of course a champion of the large hive, while Pellett was equally favorable to the two-story, ten-frame hive. As a result of the argument a question was raised in the mind of the Iowa apiarist as to whether the Langstroth hive might not, after all, be improved. The net result was a special order for seventy-five hives to be made which would combine the wider spacing and the deeper frame of the Dadant hive with

the width of the Langstroth, thus permitting the use of Langstroth supers on the new equipment.

These hives were built almost exactly to the specifications suggested by Mr. Harrison. They were of the same depth as the Dadant frames and were spaced one and one-half inches from center to center. Nine frames were used in each body which could be used with Langstroth tops and bottoms. When put to the test of actual use in the apiary, they proved so satisfactory as to convert their owner to the Dadant hive principle and he has since that time been a champion of the large hive.

Sufficient interest was aroused in this experiment to make it apparent that many beekeepers would adopt a hive built to combine the advantages of the two. It was decided, however, that nine frames would not be sufficient, under all conditions, to provide room for a prolific queen and ample stores. Accordingly, eleven frames, as used in the original Dadant hive, was the size decided upon as suited to the needs of the greater number of users. Mr. Harrison's article clearly indicates the difficulty in providing one size of hive equally well suited to all important honey-producing regions.

Is Honey Production on a Decline?

At the Detroit convention Harold J. Clay, of the U. S. Department of Agriculture, read a paper of unusual interest. In it he surveyed the current trend in honey production and called attention to the drift away from comb honey. Comb honey fills a place in the market which extracted honey can never entirely fill. There is no substitute for comb honey, but any kind of syrup can be made to take the place of extracted honey.

The most significant conclusion of Mr. Clay, however, was that the total production of honey is decreasing. His statement is confirmed by others who are familiar with conditions in states where beekeeping was formerly a prosperous business.

Within the recent past two officials connected with state beekeeping activities have expressed similar opinions to the writer. One told of a locality where there were formerly three hundred or more beemen, with not to exceed 10 per cent of that number now active. The other stated that in his state large commercial outfits are rapidly disappearing and only small ones remain.

This certainly is not an indication of a healthy industry. Declining production encourages decline in consumption, and fewer producers results in further substitutions for honey by the housewife.

Although the price of honey is largely governed by that of other sweets with which it competes for attention, there are indications that we are faced with a short supply.

Honey production in some states is becoming more highly specialized and is largely in the hands of large commercial outfits. Taking the nation as a whole, we must assume that Clay is right and that there has been a decline in the number of bees and the amount of honey produced.

Disease has certainly been responsible for some of this decline and the result certainly justifies a liberal research program in disease control.

North For Honey—South For Bees

It is more apparent every year that beekeeping is becoming adjusted to the specialization which natural geographic divisions most favor. The farther north one goes the more highly specialized does honey production become, and the farther south the greater the number of beekeepers who devote most of their attention to the production of live bees and queens for sale.

Northern honey may not be of better quality than honey produced in the South, but the longer days and shorter seasons result in much higher average yields. Likewise, in the South we find that, with weather favorable to early breeding, bees and queens can be produced much more economically.

The Lower Rio Grande Valley is one of the most favorable spots on the American continent for bee breeding, but honey yields average rather small. Occasionally, a good crop will be gathered from mesquite or from citrus, but too often yields are small. The thing which has hindered the development of a large-scale shipping business in this region is the long distance from the northern buyer. Extra carriage charges and the longer time in transit have proved to be a handicap.

An increasing number of large honey producers are establishing apiaries in the South for the purpose of providing their own source of bees. Whether this will prove profitable still remains to be proved. It would seem that the man on the ground could produce the bees to sell at prices below what it would cost one living a thousand or more miles distant to raise them. Such long trips back and forth are expensive.

In some cases it is probable that the northern man wants something to do while spending his free time in the South. Certainly, if the project does not prove profitable, the northern beekeeper is not likely to continue with it for long. Few long distance management enterprises are highly successful and such efforts will be watched with interest.

Disease Resistance in Bees

As was to be expected, there is a great deal of interest in the report of Dr. Park of the experiment looking for bees which may be resistant to American foulbrood. There is always a great danger when anything new is discussed relating to disease control that many will become over enthusiastic and take chances which are unwise.

It should be remembered that the stock under test comes from many different places from Vermont to California and represents the survivors among thousands of colonies. It should also be remembered that all check colonies in the apiary developed disease rapidly and that none of them has shown any ability to overcome it. It is apparent then that resistance is not a common characteristic and that the chances of finding it in the average diseased apiary are small.

Careful watch should be made for colonies which do have this ability, but it is unsafe to depend upon it. **Don't neglect disease. To do so is dangerous and may result in serious loss.**

We expect to keep our readers fully informed as to the progress of this experiment and to report results whether they continue favorable or unfavorable. Dr. Park and his associates have found enough promise in the stock under test to offer much encouragement for the future, but they have also found that disease control by this means offers very serious difficulties. Long and careful work will be needed to breed a strain of bees which can be depended upon to remain free from disease, if in fact it can be accomplished.

That inspectors appreciate the value of this work is evidenced by the cordial cooperation that so many of them have offered. Some of the most promising stock has been sent to the station by them. Those who feel that they have stock which may be resistant should arrange with their inspector to have it sent to the station for trial. This can be done without endangering the inspection program and, at the same time, save the stock in case it proves to be of value.

Winter Dangers

The unusually severe weather in many localities may result in heavy losses of unprotected bees. When mild weather returns and the bees are able to fly, careful watch should be made to close all entrances where bees have died to avoid robbing and the possible spreading of disease. There is also danger that bees may run short of stores and perish for lack of food. Any appearance of mild weather should be used to make sure that all colonies have ample supplies.

Are We Ready For A New Bee?

By Dr. Lloyd R. Watson,
New York

Dr. Watson will "sell" his new bee yet. Such enthusiasm always wins. There seem many to listen but as yet few to act. At the Iowa convention Dr. Watson "stole the show" and many have asked for the printing of his three talks. This is the first one.

THE little wild honeybee which we have was the identical bee of our fathers; it was also the bee of their fathers, and again of theirs, and so on back to historical oblivion till the writings of Virgil seem modern in comparison. In reading almost any agricultural treatise of our day nothing is more evident than the fact that plants and animals as they are found in their wild condition do not fulfill the exacting needs of man's scheme of things. He, therefore, sets himself to the task of developing from these wild forms organisms which will fulfill his needs. By outbreeding and inbreeding and selection he builds almost any type of plant or of animal that he wants. For example, in various parts of Europe and Asia there could be obtained from their respective natural habitat specimens of wild horses of the forest type, the plateau type, the steppe type, and the Indian Siwalik type, all possessing great hereditary diversity.

Students of antiquity tell us that the modern horse has through a long period of years resulted from the intermingling of several wild species which were probably connected with the three-toed horse of geologic times.

These skittish little progenitors of the common horse differ greatly in form, color, size and habits, and when early man began to domesticate them they were found to be markedly interfertile. There was no scarcity of wild strains from which to select specimens for breeding in any desired direction. Their striking physiological diversity and the ease with which they could be hybridized, producing fertile offspring, afforded ideal conditions for the regrouping of characters to produce new types of horses. It seems certain that our modern horses possess practically no characters which were not to be found to some extent in those primitive equine ancestors.

The evolution of the horse from small, wild ancestors, for the most part of little or no economic value, up through gradual steps to a creation of tremendous economic importance and of beauty is but one illustration drawn at random from many similar phenomena. The modern poultry house, the modern sheep ranch, the modern dairy barn does not contain the products of wild nature. The little wild jungle fowl had to be rebuilt to meet the exacting needs of man. Her size, the texture of her flesh, and her timidity had to be altered. Her natural output of 20 small eggs a year truly was a beginning but it was only a beginning toward the 300 large eggs she now produces. The modern egg-hen is not a product of nature alone. If left to nature alone she would never have existed. But what nature alone could not do, man, by dint of sympathetic study and long, intelligent effort has assayed to direct the forces of nature to the noble end that he has become if not the creator then at least the co-creator of a beautiful new thing.

The application of the principles of biology to the development of domestic forms has led to the irresistible conclusion that every animal and every plant which we know is the result of the interaction of two factors, viz., the hereditary make-up of the organism and the conditions under which it has developed. There are, therefore, two avenues of approach to the problem of the improvement of a domestic animal or plant, (1) the selection of such parents as will produce superior offspring, and (2) the providing of such conditions of food and shelter (environment) as will favor the best development of the culture.

It is too obvious that down through the years to the present time the science of beekeeping has addressed itself almost wholly to considerations which fall within the second category, viz., environment.

To discover how effectively the control of environment has been employed for the betterment of beekeeping one needs only to compare a text book of today with one of 50 or 75 years ago. The endless discussions about types of hives, methods of increase, swarm control, wintering, supering, queening, and disease control all belong essentially in the category of environment.

Notable among the industrially important inventions which have been added to beekeeping in comparatively recent times are the movable-frame hive, the honey extractor, and machine made comb foundation. These are contributions from the engineer and together with modern methods of artificial queen-rearing, they enable the industry to take advantage of the wonderful fecundity of the bee. They enable man to get more out of the bee, but without altering in the least her hereditary qualities. It may fairly be said, and it must be said, that the utmost has been made of the bees, such as we have, but the genetical potentialities of **Apis melifica** now after 3,000 years of continuous history are as a closed book.

The long static condition of beekeeping as regards the evolution of new types of honeybees is a predicament in which no enterprising person can take pride. So long has this situation existed in spite of all attempts to relieve it that a certain dangerous attitude of reconciliation to the woeful deficiencies of the little wild bee has become all but universal.

The cause of this dilemma is not far to seek. Certain obstinate differences of a specific nature distinguish the bee from all other form animals. Two of these differences are outstanding—(1) the habit of the queen of mating on the wing precludes the possibility of our selecting her mate, and (2) the diminutive size of bees prevents us from seeing them as individuals. We generally see them not as individuals but in mass. More than other types of farm animals, bees are noncommunicative. They are cold blooded, too, which peculiarity sets them apart from other animals which

we culture. Since we ourselves are warm blooded and possess about the same type of nutritive system as most of our domesticated animals we have a natural sympathy toward our animals when they suffer from hunger or thirst or cold, but such sympathy for bees is not so spontaneous nor so intelligent. On account of the construction of the hive, and the dominant preference of honeybees of living in the dark, much of their family life is hidden from our eyes. Furthermore, many of the habitual functions of bees are executed with flashing speed and obscured by their dense clustering so that at best they can be observed only by little starts. In breeding for the development of certain desirable qualities in our larger animals it is sometimes of considerable assistance when those desirable qualities are known to be associated with external characters, easy to follow and capable of measurement. It is difficult to find such external characters for bees, due partly to their small size and partly to our unfamiliarity with even the exterior peculiarities of our cultures.

It is perfectly obvious that the greatest need of the beekeeping industry of every country at this time is better bred stock. The honeybee in her present native condition is woefully inadequate to fulfill many of the functions which twentieth century agriculture would fain expect of her. Let us illustrate by an analogy which we again find in the horse world. The diversity of uses to which the horse is put requires that there be types or variety of horses adapted to specific needs. Thus the agricultural market can supply among others, carriage horses, heavy draft horses, medium draft horses, race horses, and saddle horses, each type having been developed through numerous generations to serve its own specific purpose.

Never has the beekeeping profession possessed any such wealth of types of bees specially designed and bred for specific uses. In northern climates we need bees able to resist low temperatures while in tropical and semitropical climates this quality in bees would have no particular value. It is a matter of common observation that our bees do not work well when the temperature is less than sixty degrees and they refuse generally to fly when the temperature settles below fifty degrees. Different stocks do show some variation in willingness to work at low temperatures but these figures represent a fair general statement. It may be appropriate here to mention that C. R. Kellogg, a missionary beekeeper of Foochow, China, tells me that the Chinese bee not only withstands temperatures of fifty degrees with impunity but gathers pollen and water freely at forty degrees.

In the large apple orchards of the Lake Champlain region of New York State there is annually a great demand for bees during the short period of bloom to pollinate the self-sterile varieties. Beekeepers of the neighboring country are hired by the orchardists to bring in their colonies of bees and place them at regular intervals through the orchards. Immense losses in crops have sometimes occurred in spite of these precautions because the temperature hardly rose above fifty degrees during the entire week in which the apples were in bloom. A honeybee bred specially to fly at low temperatures is needed for such a situation as this.

According to records made in my laboratory in Alfred, New York, on numerous samples of bees collected from various apiaries in the East the average tongue-length was found to be about 6.25 mm. This length of tongue enables our bees to gather nectar from many important flowers including white (Dutch) clover, alfalfa, sweet clover and buckwheat, but it is entirely too short to reach the nectaries at the base of the corolla tubes of one of our most important agricultural forage plants, viz., red clover, which therefore must rely for pollination upon the visits of a few moths and bumblebees whose tongues are long enough. When bumblebees are numerous, red clover sets a good crop of seed, but in the absence of bumblebees this important plant remains sterile and seedless. It is of interest here to note that when red clover bloom is dwarfed by a severe drought honeybees are sometimes able to span the shortened corolla tube in which case they may store a crop of the most elite honey, but still more important to the agronomist, the plants set a normal harvest of seeds. Now length of tongue is a hereditary character. Daughters of long-tongued parents tend to possess long tongues. Agronomists from those regions where red clover grows well are asking for bees specially bred to pollinate their bloom. In the early days of controlled mating of queenbees, a professor in the Cornell agronomy department proposed that while I seek to develop a longer tongued bee he would seek to develop a shorter corolla red clover in the hope that somewhere, sometime we would meet.

The idea of a longer tongued bee has captured the imagination of progressive beekeepers for many years, especially beekeepers of red clover growing regions.

Every plant and every animal possesses its own individuality. There cannot be found two trees, two animals, two leaves, two cells, that are exactly alike in every respect. Sometimes two organisms may appear to be identical, but this is because scrutiny has not been thorough enough, and even so-called identical twins will be found to differ in some details. We distinguish between our friends, or pets, the members of our herds and between trees by means of their differences. If there were no variation there could be no identification. Just so, the basis for selection within the limits of the race is the heterogeneity of the population from the point of view of the qualities to be selected. "It becomes evident then that variation is at once the hope and the despair of the breeder." It is the hope because without variation there can be no selection toward the better, and it is the despair because frequently after improved strains have been set up, the operation of variation tends to tear them down again. We find an example in the sugar beet where a high percentage of sugar has been built up by continually testing and selecting the "mother" beets for the next crop of seeds.

Breeding may be defined as "the art of improving plants and animals by hybridization and selection." We have cows, for example, which far surpass in yield of milk their ancestors, sheep with the finest wool for the manufacture of cloth, and sheep which produce a less quantity of wool but a corresponding greater yield of meat for the butcher. Aside from these types, bred for purely economical purposes, there have been produced by man races whose usefulness is very small, but which on account of their abnormality or their beauty find fanciers. These are the so-called fancy breeds such as bantams, Houdans, Frizzles, dwarf dogs, peafowl, and pigeons.

The world is ever changing and a movement toward ultimate equilibrium is everywhere seen. At the risk of stating a truth already self-evident it may be said that all plants and animals exist on the earth because their environment lets them live, which is to say because they are able to accommodate to their environment. It is a fact not without significance that amid the equilibrium seeking changes of unknown ages the honeybee has undergone no noticeable or remarkable changes. Where can we find more convincing evidence that the honeybee is in perfect adjustment with nature in its present form. She is perfect, indeed, from the viewpoint of nature. The honeybee pollinates bloom, much bloom, and nature asks nothing more of her. So was the progenitor of the modern cow perfect from the viewpoint of nature. The little wild forbears of cows bore their young in the spring, suckled them for a few days and then became nonproductive till the next season. Nothing further was asked of them. They fulfilled the purpose of their existence.

But nature's cow, nature's best throw for a cow, fell far short of

satisfying the economic requirements of man; so man was forced to refashion nature's cow to fit his needs. Nature's cow was totally inadequate for the purposes of man; so also, man's cow would be equally inadequate for her own protection and subsistence if suddenly abandoned to shift for herself. Many of the extremes that man has bred could not survive, and are dependent upon him for an artificial environment. It seems probable that our most highly bred milch cows with their heavy udders would in the wild state soon fall prey to bears and wolves. A brisk sprint of fifty rods in the hot sun might kill a prize butterfat cow. But man wants the butterfat and he is quite willing to supply to the cow artificial protection from excitement, danger, and from excessive fatigue so that she can produce it.

In exactly similar manner the wild honeybee, our common bee, is entirely satisfactory for nature; she is perfect, but when man's conveniences are consulted the picture changes color. The wild bee does not satisfy his requirements, far from it, and so there is happening with the bee precisely what has happened with every other form animal—he is confronted with the task of designing and building a modification that will satisfy his purposes.

The fact seems wholly unassailable that through selection and breeding man can substantially change about any hereditary quality that an animal may possess, and so remodel it to suit his needs or his fancies. Thus Darwin once said: "State a quality which you desire and I will breed it in the animal in question. That certain limits exist in this connection is to be understood."

Schwann discovered that the cell is the basis of all tissue whether animal or vegetable, and that animal cells and vegetable cells are essentially alike. Darwin's studies proved that the laws of breeding of plants and animals are essentially the same. Every breeder of animals and plants recognizes and is guided by this truth. we know that all organisms tend to vary and we know that close breeding along the line of any particular variation tends to increase that variation, and to fix it. Thus Bates, Boothe, the Collens brothers, Bakewell and other early breeders gave us our shorthorns and improved sheep. So also our Hamiltonian horses and marvelously improved breeds of swine were developed in rapid succession. There is now no longer room for doubt that what has been done with our higher vertebrates can be done with insects.

It is a notable fact that to the present time the beekeeping profession has been obliged to go all the way to the bee to study her wild ways the better to accommodate to her every humor. Man has ever been the ardent suitor and the bee has ever been the disinterested coquette. The conscious need of a bee really bred with a definite thought to the conveniences of man and the economic needs of agriculture, is by no means new. The great scientists Huber and Mendel recognized in bees excellent possibilities for breeding experiments, but their efforts met the common embarrassment of all — they could not control the mating of the queen. Had they been able to do so our problem would now be a different story. Only the most versatile imagination can visualize what the effect might have been upon twentieth century agriculture in general, and upon beekeeping in particular. It is interesting to contemplate whether a hundred years of scientifically conducted bee breeding would have given to the beekeeper as many new, useful and beautiful varieties as they have given to the poultryman.

By its intrinsic nature agriculture is forever fettered to the ground, but even so agriculture is a living, growing thing which is ever on the change. The freeman of the soil rears today no longer the same varieties of animals and plants that were his choice a few years ago. Although the little wild honeybee has been standard in all countries for centuries, the time is here when the needs of an ever progressive agriculture testify to the fact that we are ready for a new bee.

So! This Is Florida?

By Elmer Carroll,
Michigan.

I went to Florida last winter for recreation, and to learn of southern beekeeping. Since then I have received many requests for my impressions of beekeeping in Florida. These come particularly from northern beemen who are interested, as I was, in wintering in the South and at the same time increasing colony count for northern production.

In the early part of November, I located thirty-five miles south of Jacksonville. From this point I made several trips down through the state, but failed to learn much from Florida beekeepers.

We received our copy of the Valdosta program and saw listed, "Beekeeping in Florida," and decided to attend the first day so as not to miss this feature. Imagine my disappointment when the topic was warped into something like a chamber of commerce invitation for the Yankees to visit the Deep South.

From then on we learned what we could by constant observation. We watched particularly a nearby yard of thirty colonies. We also kept in touch with yards near Melbourne.

R. E. Foster, Florida Apiary Inspector, covered much when he told us: "We have a rather peculiar situation here in Florida." He very kindly explained that the northern part of the state was better adapted to queen and package business than the southern part, which was better suited for honey production..

As in any other location, Florida beekeeping has many drawbacks to be taken into consideration, such as mud wasps, ants, and swarming. But from what I could see, I believe much can be done to better these conditions. There is one thing to be considered about which we can do little I'm thinking of the December freeze and rainless days of last year. But I remember other southern states have dry seasons also.

I purchased several books on southern beekeeping, but they were written too long ago. There seems to be a scarcity of up-to-date literature on this subject in book form.

On my next trip south I plan to take along seed bees, that is, small packages made up from our best producing colonies together with ten or fifteen pounds of feed per unit. I believe that in the spring I can bring back to Michigan enough increase to pay for the venture, besides enjoying the Florida climate.

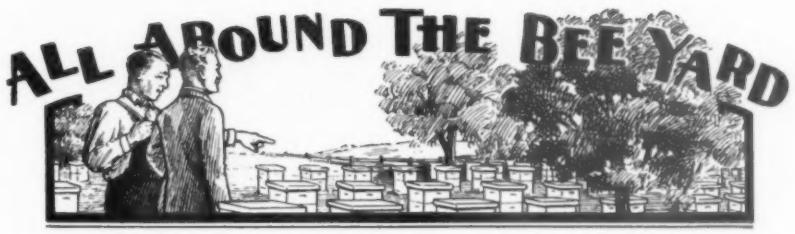
That is my plan. As to recommendations, I would say, as Mr. Darby did at Valdosta: "Go down and look it over one season yourself, then form your own opinion. You will at least enjoy Florida's biggest asset, sunshine.

What About Honey Prices?

Looking back over the Government Honey Market News Letters reached here since 1927, we find that the carlot price for middle western white clover honey each year is as follows: 1927, 7 cents; 1928, 7½ cents; 1929, 8 cents; 1930, 6¾ cents; 1931, 5¾ cents; 1932, 5 cents; 1933, 6 cents; 1934, 6¼ cents; 1935, 6½ cents. Now the question to be asked is what is the top? In this movement, it was 8 cents in 1929.

Going back to the lead article by Snyder in January, we bring up the question of just what the crop should be because of loss of markets. There is always a loss of markets at higher prices, that is a commodity selling loss. The higher the price, the fewer the buyers. Sometimes when buyers leave, they do not come back. We must remember that.

For instance, just now we have a splendid market among bakers but some are quitting because the price of honey at 6½ cents to 7 cents in carlots is too high for them. They can use cheaper sweetening agents and get along, even though honey does give them some advantage.



By G. H. Cale

Another National Honey Week is a memory except for its effects, and they usually reach far. Our Honey Week efforts this year were new for us. Letters about honey with enclosures about honey, recipes, facts and information of interest to each class to whom the letter was addressed, were sent out to doctors, dentists and bakers.

Other years we have made displays in stores and banks, ran guessing contests, used the radio and the newspaper story. This year was more in the nature of a routine approach.

In addition there was an article on local beekeeping in the town paper giving the names, locations and something of the history of beekeepers in our vicinity. Few people know who the beekeepers are, where they are or just how successful they are. This resulted in considerable interest.

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Apparently the increased use of package bees has its influence on the purchase of queens. Since packages contain queens of the current season's breeding, they do not require requeening the same year. So where package bees are used to replace previously overwintered colonies, the normal purchase of queens, which occurred under the previous plan of wintering everything possible, is greatly diminished.

This is a new angle of the package business which the southern breeder should remember when he reports that his business in queens is not as large as it used to be.

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That was a wonderful talk of Harold Clay's at Detroit. It is published in full as the lead article in the January issue of "Gleanings."

His analysis of honey marketing is revealing. He makes a plea for the return of comb honey. So do we. Comb honey should not disappear from the honey market. It was at first and still is the deluxe product of the hive. In spite of the greatly increased use of extracted honey, most people still think of comb honey when the name honey is mentioned.

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It is a cold, dreary winter here. With two periods of flight, the intervals between have been too far down toward zero to be assuring. The trouble with this middle latitude is that it does not force complete winter protection as the colder climate of the North does. Yet it does not allow that freedom from packing that comes farther south. Most of us usually take a chance.

This is brought out in the report of E. A. McGuire, of Nebraska, in his department in "The Beekeepers' Item," December, where he says: "The wintering problem of a majority of Nebraska beekeepers seems to have resolved itself into seeing that hives have a good windbreak and plenty of stores. To my knowledge only one or two extensive beekeepers of the state practice cellar wintering and probably less than 2 per cent practice outdoor packing.

"Wintering outdoors with plenty of stores and a windbreak will bring bees through in nine out of ten years. Eventually we will have a real old-fashioned winter and then the southern package shippers will be called on to restock our yards."

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Continuing with the subject of wintering, I was surprised one day, with the thermometer standing at 20, to observe considerable movement of bees at the entrances of colonies in a sheltered location. Some dead bees were brought out and deposited. Apparently the entire clusters were loose and moving around and could easily reach stores. I believe, with temperatures from 10 above, up to and above freezing, bees in a sheltered location, in our climate, will winter in almost any weather with proper stores and good winter clusters.

However, with temperatures from 10 to below zero, with little chance to move, bees may die from starvation, since they cannot reach new stores. Short periods of extreme cold seem to have little effect. It is the long protracted period of unusually cold weather that does the damage.

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At Detroit, Editor Deyell, of "Gleanings," gave an interesting talk contrasting the old methods of beekeeping with those of today: the early days of extracted honey production under the leadership of Moses Quinby; the comb honey era with its contraction ideas that merely led to destruction; then the second extracting era, beginning in 1906 and continuing today, during which period comb honey has been reduced relatively to a minor position.

As Editor Deyell pointed out, there has been a great simplification in apiary management until beekeeping has entered a period of lowered costs. We are rapidly approaching the point where it probably will be hard, indeed, to reduce costs very much more.

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Reports indicate that everywhere this season swarming was bad, supersedure was rampant, the honey crop was short. The season was freakish with over abundant early moisture and later excessive drouth. Do these conditions always go hand in hand? This is one year when all the old rules failed and we had to make new ones.

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Here's a good one from "Bees and Honey" for December, quoted in turn from the Wisconsin Horticulturist:

"Let's not be in too much hurry to sell our honey all at one time. Why not keep a little to be sold steadily throughout the year instead of dumping it all in the fall at low prices? Think that over if you have honey to market."

That's good advice, but sometimes it's hard to follow, especially in a location where the honey produced is greater than the local market demand and it has to be sent out in carlots or less than carlots to a distant buyer.

— o —

Probably the best market insurance for any class of markets is for the beekeeper to follow faithfully the conditions, prices and schedules given in Harold Clay's market report. Write to the Bureau of Agricultural Economics, Washington, D. C., -for the "Honey Market News Service." This is issued semi-monthly, on the first and the fifteenth, giving information from producing areas concerning the condition of honey plants, the progress of the crop, buying and selling, quantities of honey available, and prices. It also has a report of the honey purchases and receipts at the different market centers.

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It is interesting to note, in the reprint from "Gleanings" in our December number, page 561, that when A. I. Root first proposed the revolutionary idea that live bees be sold by the pound, the prices suggested were $1.00 a pound. Under the present Trade Agreement, with the standard minimum price of $2.45 for a two-pound package, we are still in line with those earlier days. The article was first published in 1879. Present prices aren't so bad after all.

A Trip to the State Convention

By Chas. S. Kinzie,
California.

I WILL try to tell you something of my trip north to the state convention at the Leamington Hotel, Oakland. We certainly had a good time. The hotel accommodation was good, meals were good and they must have had a good cook.

Mrs. Kinzie and I started Sunday morning at 4 o'clock, arrived there at 5 p. m., 460 miles in thirteen hours.

We had a honey exhibit with pictures of twenty-two years of honey exhibits and a large painting on canvas six feet high and twelve feet long of orange groves, an apiary of white hives, mountains covered with sage and other wild flowers in the background and, at either end, large eucalyptus trees. There were seven other honey exhibits and much honey and food, two displays of cans and Kellogg's display.

It was a three-day session. There were about 240 present. Mrs. Malitta Jensen of American Honey Institute was one of the main speakers. I am a cook and a cake baker so I ought to know that Mrs. Jensen sure knew her honey in cooking and baking. Mrs. Kinzie and Mrs. Krebs, President of the Women's Auxiliary of the State Association, did all they could to help her. The Women's Auxiliary is doing a wonderful work for the state of California. After the convention, Mrs. Jensen started towards the southern part of the state to hold demonstrations at Fresno, and at San Diego.

Later at Pomona we had the largest gathering I have seen for some time—over 100 beekeepers—227 in all. The demonstration was in the hall of the gas company, who furnished help and their kitchen. The Southern California Beekeepers' club got up the demonstration. I was elected president of the Southern Club at its last meeting. I was also elected president of the Riverside County Honey Producers' Association; so you see I will be busy. I intend to hold large meetings this winter to boost the prices of honey, and uses of honey in the home.

Here are two ways to boost honey. Support the American Honey Institute. Get a honey recipe book in every home in America. Then we will be getting two cents per pound more for honey and the beekeepers will have to step on it to raise enough. The queen breeders will have to raise more queens, the package bee men will have to step on it to keep up, the supply men will have to run overtime and the bee journal men will double their subscriptions.

My wife and I stood at the Pomona Fair for eighteen days and passed out with the aid of others 17,000 honey recipe books of different kinds and did not have near enough to go around as there were 555,890 people who went through the gates. We should have had 75,000 recipe books. It is amazing how the people say they use more honey than they did before they got a recipe book. Some report using three times as much. As it stands now, production is greater than demand. That can be reversed. We will then have to speed up to supply the demand. Other industries advertise their products but the beemen get the honey and wish for someone to come and buy it and then kick if the price is low.

Support the American Honey Institute so they can put a honey recipe book in every home in America, then you will get a good price for your honey and you will be glad of your support. The book "100 Honey Helpings" put out by the American Honey Institute is a fine recipe book. Let us all try to help the Institute more than ever to get one of these in every home.

Remember, my wife and I have given thirty days to talking at fairs, conventions and at bee meetings about honey and its uses. You know that honey goes into the kitchen, not into the parlor. Sixty-five per cent is bought by the housewife or the cook or the daughter who prepares it for the table. So advertise it in the kitchen.

A honey recipe book in the kitchen will do the trick and a cent a colony or a dollar a ton or five cents a case or a dollar a member will surely help the Institute. Seven thousand dollars a year is pretty small but they have done wonders with it. Fourteen thousand dollars a year will do twice as much. Twenty-five thousand dollars will do wonders.

I am willing to spend more than a month in 1936 to promote the use of honey. I am willing to give double the honey to the American Honey Institute so they can have a fund of not less than $15,000 in 1936, so they can carry on their work twice as effectively as ever before.

Let's all start now. Mrs. Kinzie and I will see you at San Antonio next year and you can have a look at a few good looking California beemen. Yours for a great big Honey Institute in America!

The Louisiana Comb Package Shippers' Meeting

WHILE in Louisiana recently, I accepted with enthusiasm an invitation to attend the annual meeting of the Louisiana Comb Package Shippers at the Louisiana State University in Baton Rouge on December 14.

The meeting was called to order by a prayer by Father Coulombe. Mr. Anderson, Louisiana State Entomologist, addressed the meeting on inspection work. I believe Mr. Anderson has a very efficient inspection system functioning in Louisiana. Dr. Whitcomb in charge of the Federal Bee Laboratory at Baton Rouge, discussed the federal work being done to eliminate package losses to the buyer. He stated that losses in shipment dropped to a small fraction during the past season largely due to standardized crating and to educating the express employees to a standardized method of loading the bees in the express cars.

In the open forum following the talks I was surprised to find that this bunch of shippers had returned as much money as they kept last year. I wondered what the merits of the comb package might be to create such a heavy demand. The first reason given was a genuine eye opener to me. They ship the packages with the queens introduced and laying enroute—a stunt I had always thought highly hazardous and impossible but which would mean at least four days' time saved to the purchaser when time is money. It also furnishes a queen that has not had to quit laying.

The Association informed me that last season they had not received any complaints because of supersedure and that only one queen was reported lost in transit, a remarkable record. In my package purchases I figure on getting only 80 per cent into the honeyflow.

It is also claimed that there is less drifting because of the type of shipping cage used and the method of transferring which it makes possible. In mild weather with packages I have found drifting a big problem at the receiving end especially when one is crowded for yard space.

The comb package with a frame of brood, two pounds of bees and the queen laying saves about three weeks' time and looks very good.

The following officers were elected for the year: President, J. L. Gaspard, Hessmer; Vice President, Moore Roy, Hessmer; Secretary, Jes Dalton, Kenner; Assistant Secretary, Fred Ephardt, Luling. They also adopted the policy of stepping the officers up in rotation.

After lunch, the meeting reopened with a discussion of prices for the 1936 shipping season. The prices adopted at the Southern States Conferences at Nashville were decided upon with one exception. The price of additional combs of brood are to be 70 cents each instead of 40 cents. Plans were made for group advertising, the supplying of a limited number of packages on Modified Dadant

combs, collective buying of supplies and close cooperation in filling of orders.

I went to the meeting expecting to find a small group of small beekeepers ruled by strong prejudices. Instead, I found about two-thirds of the straight commercial package shippers of Louisiana present. A group of broad-minded conscientious beekeepers striving to improve their product and service and to put out merchandise to suit the buyer.

If honey producers of the North are planning to spend the winter in the South, I advise them not to pass up Louisiana. If you want to know the southern shipper, go beard him in his lair, but take along plenty of good blankets and warm clothes for the cold snaps, a sense of humor for his jokes and pranks, and above all a copper-plated stomach for the powerful coffee of the South.

Ed Stewart,
Missouri.

New Carton for Sixty Pound Cans

By W. E. Lindsay,
Colorado.

Although they are being advertised and listed by supply houses, we do not see much comment on the new cartons for sixty-pound cans. A case for a single sixty-pound can is much needed and has been wished for these many years. The double case is too heavy. The wooden export case for two cans ⅜-inch sides and ¾-inch ends and partition weighs 18 pounds or over so the case loaded with two sixties weighs about 140 pounds.

This intermountain region is a carload region and should be interested in lighter packages for rapid and easy loading. We have always loaded refrigerator cars here and the ventilating floor is a grating difficult to wheel a warehouse truck over. It is a two-man job to carry a 140-pound case but with the single can carton, a string of men, each with a can in his arms, can soon trot a car of honey into place.

There may be one or two drawbacks to it. We almost universally load two cans high. Whether the cartons and cans would stand it one on top of the other, I don't know. The present double wooden case makes a firm protection for the can underneath. The question is whether the lighter cartons and cans will stand it two cans high. Also the end thrust of the car is great and the present wood case stands the thrust and protects the can. For the last two or three years, truckers have been coming in here buying honey in sixties, taking it out to the middle states and distributing. They do not want a case of any kind, just the cans and they pack them close in the truck with a super load of fruit or such like on top. They have been paying very close to what we can get through our associations and we do not have to grade for color nor pay a selling commission and we have the cases left. We may drift largely into this manner of getting our honey to the consumer — no bottling or processing, no grading; presumably but one middleman, the trucker.

If we had a wooden single case to ship in, the question of loading in a freight car two cases high would be settled. As timber and lumber get scarcer and higher priced, wood cases will cost too much, so that the corrugated carton being cheaper, is the next best to be considered.

Instead of $1,500 $6,468 Registration Collection in Michigan

Don P. Barrett, Chief Inspector of Apiaries for Michigan, calls our attention to a very mistaken report of his speech at the International Convention in Detroit published in the January issue. The report says that $1,500 was collected in Michigan under the new registration law. We quote from Mr. Barrett's letter:

"I do not know who reported this speech but he reports a list of 6,000 paid beekeepers, 4,000 having paid at 75 cents and 2,000 at $1.50 which obviously, would total far more than the $1,500 given."

Figures are 6,301 paid, total $6,468.94 collected in a month and a half.

The following data show the results of this law to the date of December 15 or a period of six months. In that time there were 8,500 certificates issued representing approximately 9,563 apiaries registered. Approximately speaking, 7,092 have been registered at the 75 cent fee and 2,572 at the $1.50 fee. The total receipts to December 1 were $9,241, 57.9 per cent representing apiaries of less than ten colonies and 42.1 per cent apiaries of ten or more colonies. While the latter beekeepers represent only about 20 per cent of the total beekeepers in the state, they have paid four-tenths of the total revenue.

Pardon our error, Mr. Barrett, and thanks very much for the correction.

List Your Name

A list of dealers in bee supplies, package bees, nuclei and queens is compiled once every year by the Bee Culture Laboratory of the U. S. Department of Agriculture. This list is sent to correspondents who wish to purchase bees, supplies, etc. The list is now being revised and those who desire to be listed again or who wish to be entered for the first time should send to the Bee Culture Laboratory, National Agricultural Research Center, Beltsville, Maryland, the following information: Name and address; dealer in (1) bees and queens (state race); (2) package bees (state type and race); (3) bee supplies; (4) honey packing equipment. The list will be closed for entries on **April 15.**

Hints for Using Honey

This is the title of Extension Bulletin No. 150 from the Michigan State College Extension Division written by Roberta Hershey. Readers will remember the report of Miss Hershey's talk at the Detroit Convention. Those who heard her will remember the flashy way in which she reported the conditions of honey consumption in her state.

"Hints for Using Honey" is an excellent recipe and suggestion folder with directions for using honey in the place of sugar and recipes for cakes, breads, pies, cookies, salads, desserts and confection.

Ask for Extension Bulletin No. 150 from the Extension Division, Michigan State College, East Lansing, Michigan.

To Package Bee and Queen Shippers

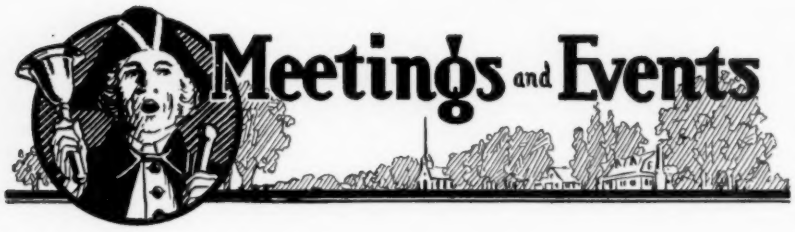
In reply to a telegram from this office the General Crop Section officials wired this office as follows: "Retel Supreme Court decision relates only to production control program and does not apply to marketing agreements or orders which were not before court."

From this telegram it it evident that the Marketing Agreements, including the Bee Marketing Agreement, will continue.

J. M. Robinson,
Managing Director,
Alabama.

Migrants

According to Webster, a "migrant" is a person who moves from one region to another with a view to residence. The "Farm Journal" for January reports that John N. Demuth, of Pembroken, New York, has gone south with 210 colonies to the orange groves, expecting to return with 800. Maybe that's far fetched, but friend John is not alone, as each year finds more added to the bee-loving migrants who choose to live at ease where the balmy sun shines. They try also to add profit to pleasure.



Indiana Winter Meeting

Here are the remaining winter meetings scheduled in Indiana for February and up to the fifteenth day of March. Those interested in the remaining series, which runs to the twenty-third of April, watch for next month's issue.

Date	County	City	Time
Feb. 17	Fulton	Rochester	1:30 p. m.
Feb. 18	Marshall	Plymouth	1:30 p. m.
Feb. 19	St. Joseph	South Bend	1:30 p. m.
Feb. 20	Elkhart	Goshen	1:30 p. m.
Feb. 20	Elkhart	Elkhart	7:30 p. m.
Feb. 21	LaPorte	LaPorte	1:30 & 7:30
Feb. 22	Porter	Valparaiso	1:30 p. m.
Feb. 24	Putnam	Greencastle	1:30 p. m.
Feb. 25	Parke	Rockville	1:30 p. m.
Feb. 26	M'tgomery	Crawfordsv.	1:30 p. m.
Feb. 27	Fountain	Covington	1:30 p. m.
Feb. 27	Warren	Williamsp't	7:30 p. m.
Feb. 28	Newton	Kentland	10:00 a. m.
Feb. 28	Newton	Morocco	1:30 p. m.
Feb. 29	Lake	Crown Pt.	1:30 p. m.
March 2. No meeting—getting out monthly News Letter in office.			
March 3. No meeting—getting out monthly News Letter in office.			
Mar. 4	Hancock	Greenfield	1:30 p. m.
Mar. 5	Howard	Kokomo	1:30 p. m.
Mar. 6	Grant	Marion	1:30 p. m.
Mar. 7	Madison	Alexandria	10:00 a. m.
Mar. 7	Madison	Anderson	1:30 p. m.
Mar. 9	Vermillion	Newport	10:00 a. m.
Mar. 9	Vermillion	Clinton	1:30 p. m.
Mar. 10	Vigo	Terre H'te	1:30&7:30
Mar. 11	Knox	Vincennes	10:00 a. m.
Mar. 11	Knox	Bicknell	1:30 p. m.
Mar. 12	Sullivan	Sullivan	1:30 p. m.
March 13. Greene, Switz City or be arranged.		Linton, Worthington, Bloomfield.	Time to
Mar. 14.	Clay	Clay City	1:30 p. m.
Mar. 14.	Clay	Brazil	7:30 p. m.

Can You Get This Kind of Cooperation?

Mrs. Ila Leonard Wermuth, Household Editor, Michigan Farmer, gave a honey demonstration before the members of the local Grange at Dimondale, Michigan, which was attended by about seventy-five interested Grangers. Local beekeepers furnished honey for attendance prizes and for use in the demonstration.

R. H. Kelty, Michigan,

Prosecution Under Michigan Registration Law

The first prosecution under the beekeepers' registration law of Michigan was of a commercial beekeeper living at Elmhall, Gratiot County, Michigan, who was brought into court by state police under a warrant issued by the prosecuting attorney, charged with failing to register and pay registration fee as required by the beekeepers' registration law enacted by the last Michigan Legislature. He pleaded guilty and paid a fine of $10.00 and costs.

Mr. Barrett reports splendid cooperation from the prosecuting attorneys of the various counties in notifying the beekeepers who have failed to register, and it is expected that few prosecutions will be necessary.

R. H. Kelty, Michigan.

Winson, Pres. Fraser Valley Honey Producers' Ass'n (B. C.)

The Fraser Valley Honey Producers' Association, in its sixteenth annual meeting, held at New Westminster, re-elected J. W. Winson president and appointed E. R. Freeman vice-president, with M. V. Jenks, New Westminster, as secretary-treasurer.

V. Jenks was appointed membership secretary and field day organizer; J. H. Holt, Kennedy, auditor. W. H. Lewis, the first beekeeper of British Columbia and a charter member of the organization, and J. L. Street, blind beekeeper of Port Hammond, were appointed honorary directors.

J. A. Catherwood, Mission; P. Hodgson, New Westminster, and A. A. Parnell, New Westminster, were appointed directors.

P. Faircloth, Coquitlam; George Thompson, Strawberry Hill; F. Langton Johnson, Chilliwack; J. H. Holt, Kennedy, and J. A. Lacoste, Ladner, were appointed the executive committee.

Considerable discussion arose about the Vancouver exhibit and its improved accommodation and prize list. The members also favored compulsory annual registration of beekeepers for better inspection of bees.

E. R. Freeman, W. Jenks and V. Jenks will direct a series of field days featuring a special course in beekeeping during 1936.

A. W. Finlay, provincial apiarist, reports a below average crop for 1936. According to his figures, 3500 beekeepers obtained a million and a quarter pounds of honey during the past season.

F. H. Fullerton, B. C.

British Columbia Honey Wins Again

British Columbia honey again won world recognition when H. E. McCulloch of Owl Creek carried off the second and third prizes at the Imperial Fruit Show, at Cardiff, Wales. The award to Mr. McCulloch is of special merit because his was an individual entry and was faced with severe competition from empire-wide sources and cooperative association facilities for selection from all parts of the world.

The New Zealand Honey Control Board was awarded the first prize in Class 7 with a score of 84. The British Columbia entry secured 81 points in the same class.

F. H. Fullerton, B. C.

Possible Registration Fee Washington's Only Hope

Prospects of getting a state appropriation for disease in Washington are unfavorable, according to I. L. Swain, president of the Washington State Beekeepers' Association. The industry may as well tax itself with a registration fee to provide funds.

At the meeting of the Yakima County Association, December 28, Mr. Swain announced the appointment of a committee composed of C. W. Higgins of Wapato, C. H. Shader of Sunnyside and Fred Mandery of Tenino to prepare a bill of changes in state apiary laws to provide for colony registration to be presented at the next session of the State Legislature. R. C. Immele, of Toppenish, spoke in favor of spending the registration money in the county in which it is collected.

The Yakima group voted to contribute a cent a colony to further the work of American Honey Institute. It also considered asking protection for quail and ring-necked pheasants as enemies of the potato beetle. Spraying for beetles causes great loss among bee colonies in the valley.

I. L. Neill, Washington.

Virginia Beekeepers Meet

Virginia Beekeepers met on time, in Lynchburg, December 10th for their annual meeting. A pleasant day, a fair crowd, a great success. Visitors have remarked "Virginia meetings are always snappy and interesting." The reason: their officers and members are active, interesting beekeepers.

The most interesting discussion was led by T. C. Asher and concerned production problems. The American Honey Institute held a prominent place in various discussions throughout the meeting and $10.00 from Association funds was voted in support. An additional $10.30 was collected from individual beekeepers for Institute funds. While this contribution is comparatively small it is a reasonable one when consideration is given the several lean years beekeepers of Virginia have experienced since 1931.

Henry W. Weatherford's proposal for advertising a recommended list of beekeepers who are able to supply bees for fruit pollination was heartily accepted, and plans placed in motion. Beekeepers desiring to be listed will

(Continued on page 87)

Wintering Bees in Eight-Colony Cases

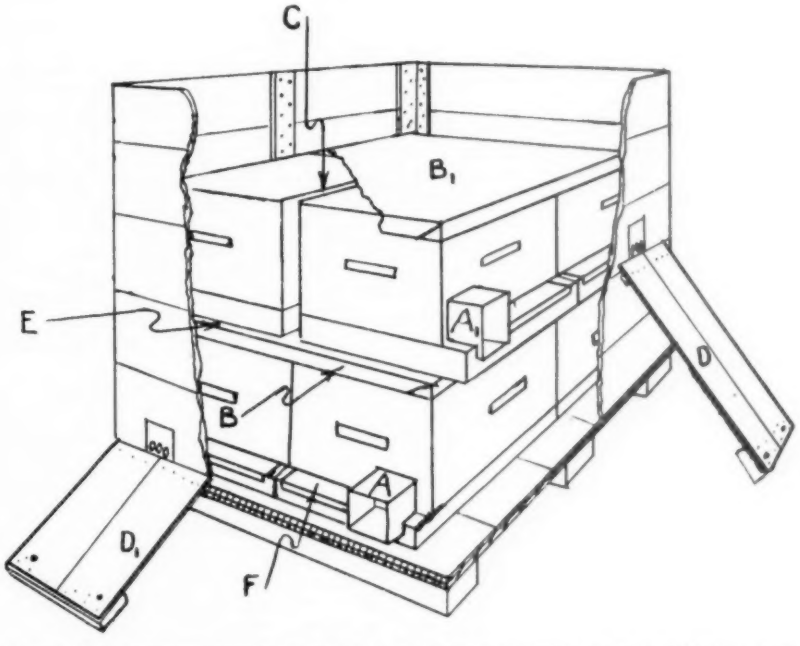
By Philip Bishop,
Nova Scotia.

THE following is a description of my system of wintering bees in eight-colony cases. The outstanding advantage of the plan is its economy of equipment and labor. Although no one else, as far as I know, has ever used this system, it is no experiment in my bee yards. I have used it extensively during the past twelve years and it has given such satisfactory results that I now use it exclusively. One of its features is a unique method of arranging the colonies on their summer stands.

It will be seen by consulting Figure 1 that the colonies are placed in groups of eight. The central portion of the group, consisting of four colonies, is arranged exactly the same as when quadruple winter cases are used. My winter cases resemble the quadruple winter cases; but they are about one foot higher and have flight holes on the sides as well as the ends. It will be seen from Figure 1 that the four colonies which form the outer portion of the group have side entrances, and that when packed, they are placed on top of the four central colonies. (Figure 2.)

The four central colonies remain throughout the year on the stand which forms the bottom of the eight-colony case. The procedure at packing time is to move these colonies up together and center them on the stand. Entrance tunnels are then put in place and the cases assembled. Newspapers are next placed on top of the inner covers. (I use a heavy burlap material for inner covers.) The newspapers are important in keeping the colonies warm and free from condensed moisture. I use a thickness of six sheets of paper in making this covering, and allow the edges to extend about two inches beyond the sides and ends of the hives so that they can be folded down. (Figure 2-B.) When newspapers are in place, the side packing is poured in. I use four-inch thickness of fine planer shavings. After this I spread about half an inch of planer shavings on top of the newspapers to form a bed on which the upper hives will rest.

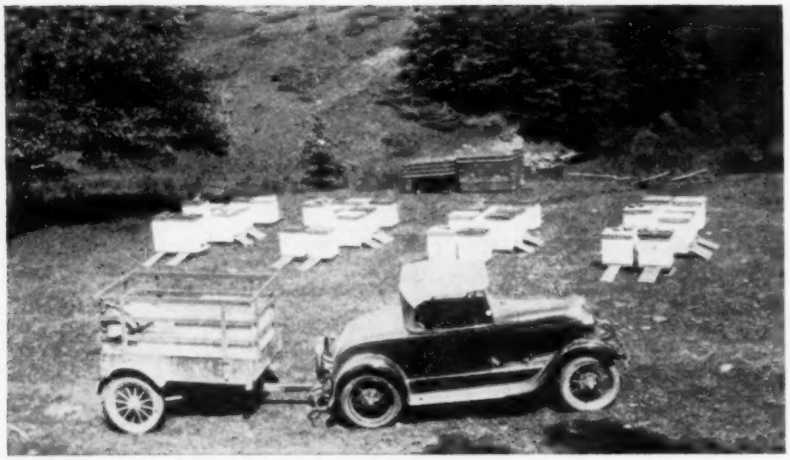
Yard of forty colonies of bees, packed in eight colony cases.



A and A-1, entrance tunnels. B and B-1, newspaper covering on top of hives. C, two-inch space between backs of upper hives. D and D-1, alighting boards. E, half-inch space for packing material between upper and lower hives. F, block of wood filling part of entrance not covered by tunnel.

I place the upper hives one inch closer to the side of the case than the lower ones. Thus there will be a thickness of only three inches of packing there, and when the hives are in place, there will be a two-inch space at their backs. (Figure 2-C.) This space may either be left empty or filled with packing as the operator desires. I have two reasons for placing the upper colonies in this manner; they do not require as much packing as the lower colonies, and the two-inch space allows more room to get the last pair of hives, with their entrance tunnels affixed, in place. Newspapers are used on the upper hives as on the lower, and packing is finished by filling in about ten inches of shavings on top.

One criticism of this plan might be that there would be trouble with bees drifting, since the outer colonies must be moved when they are packed. It should be noted, however, that the relative positions of the hives are changed very little. They are moved back about three feet, and up one foot. I use a conspicuous type of



Yard of thirty-two colonies of bees on summer stands, grouped for wintering in eight-colony cases.

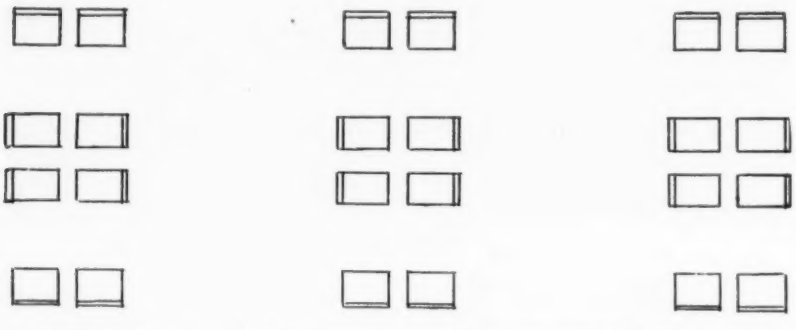


Figure 1. Position of hives on summer stands. Double lines indicate entrances.

alighting board (Figure 2D) which assists the bees in locating their home and I find no difficulty with drifting bees either when packing or unpacking. My plan might also be criticized because hive entrances face in all four quarters. My experience would lead me to believe that this is a disadvantage only when the apiary is in an exposed location. Under such circumstances, the colonies with entrances facing the prevailing wind may not winter as well as the others. A good windbreak will remedy this defect.

From the point of view of economy, I think my plan rivals the tarpaper method of packing bees. I will not go into details on costs because the prices of materials vary so much in different localities. The interested beekeeper can easily figure it out for himself. I find that cost of cases (including depreciation) and labor of packing comes to about eight cents a year per colony.

Blue Flowered Sweet Clover

We have grown Trigonella here for a number of years and we find that it normally grows to a height of about eighteen inches and blossoms freely for a short period, usually not more than about three weeks. During this time the bees work it continually. We have been in the habit of sowing it about three different dates at approximately two week intervals, commencing around April 20th here. In that way we have the crop coming on and blossoming at different times.

We are satisfied that it does not compare with sweet clover for bee pasturage, under our conditions, but should the ordinary sweet clover crop fail for any reason, such a crop as Trigonella is useful because it can be sown and will quickly reach the blossoming stage. As a forage crop with us, it is of little value.

T. M. Stevenson,
Saskatchewan.

Regarding a Tariff on Beeswax

At the last convention of the American Honey Producers' League, the following committee was appointed to make recommendations to the next convention regarding a tariff on beeswax—E. R. Root, Roy Grout, J. W. Newton, E. G. LeStourgeon, and H. F. Wilson, Chairman.

In order to present a recommendation based on facts, we must have some figures on beeswax production in the United States, the amount imported and exported, and the uses of beeswax in manufacturing. Beekeepers and others throughout the United States are urged to send us samples of products reported to contain beeswax and the names of firms and manufacturers buying beeswax.

This question is of vital interest to all the beekeepers throughout the United States, and we will appreciate your forwarding the Committee full statistics on beeswax production in your yards and the amounts sold, with the names of individuals or companies buying such wax. Do not wait—begin at once to send in such information on a postal card. For convenience, your correspondence may be directed to Box 2020, University Station, Madison, Wisconsin.

At the same time, your Committee will try to get together an exhibit of honey products for the American Honey Institute, and would appreciate receiving information regarding honey products, with samples wherever available.

H. F. Wilson, Chairman, American Honey Producers' League Committee on Beeswax Tariff.

Control Committee Eulogizes Stover

"WHEREAS Mr. D. D. Stover met with a fatal automobile accident, May 2, the Control Committee desires to express its deep appreciation for the constructive work Mr. Stover did as a Control Committeeman of the Bee Marketing Agreement. It is the feeling of the Control Committee that the package bee and queen industry has lost one of its outstanding leaders in the package bee and queen business, as well as a man of sterling worth.

THEREFORE, be it resolved that these resolutions be put in the minutes of the meeting of the Control Committee and a copy of these resolutions be sent to the Stover family."

HoneyforHoney'sSake

The use of honey as a safe sugar for diabetics always brews an argument. As has been said hundreds of times, it is safe to use honey in many instances but not in all cases, thus the reason for first consulting your physician.

Quality honey should sell itself for honey's sake without having to resort to such propaganda as diabetically safe, medicinal value and so forth. And it is as hard to make some people like honey as it is to deprive others of this delicious sweet. More honey can be retailed by giving the customer a mental picture of industrious bees working among sweet smelling blossoms, than a picture of a prescription counter.

Elmer Carroll,
Michigan.

New Michigan Rules and Regulations

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
James F. Thomson, Commissioner

BUREAU OF AGRICULTURAL INDUSTRY
A. C. Carton, Director

Don P. Barrett, Chief of Apiary Inspection.

Rules and Regulations Covering Importations of Bees on Combs or Used Beekeeping Equipment Into Michigan No. 607

DUE to the fact that during recent years there is an increasing trend in the shipment of bees into Michigan on combs, in order to safeguard the fruit, seed and beekeeping industries of the state against the possible further spread or re-infection of a brood disease of the honeybee, known as American foulbrood, into areas now clean or in which the disease is now under control, it is necessary to promulgate rules and regulations governing the issuance of permits.

Attention is called to Act No. 26, Public Acts of 1935, particularly to Section 13 of said Act which is as follows:

"It shall be unlawful for any person, firm, corporation, or transportation company to bring into this state any bees on combs, used hives or other used apiary appliances from any other states or other countries without first having received a permit so to do from the commissioner of agriculture, which will be issued only upon satisfactory proof that said bees and used beekeeping appliances are free from disease. Said permit must be attached to shipment containing bees or goods so transported: Provided, however, that common carriers may transport bees and apiary appliances through this state if the shipment originated outside of this state and is destined for some point outside of it."

Now, therefore, I, James F. Thomson, under authority conferred upon me as Commissioner of Agriculture of the State of Michigan, under and by virtue of the provisions of Act No. 26, Public Acts of 1935, do hereby forbid the transportation of bees on combs, used hives or other used apiary appliances into the state of Michigan from any other state or country except by permit from me, which shall be issued only after the following rules and regulations have been agreed to and complied with by the owner or shipper of said bees or used beekeeping appliances.

I. A health certificate issued on the basis of a recent inspection made by the official State Inspection Service of the state of origin stating that the apiary or apiaries from which the bees or used beekeeping appliances came have been duly inspected and are free of American foulbrood must accompany the request for permits to ship into Michigan.

II. The owner must furnish the Michigan State Apiary Inspector information as to where said bees and equipment will be located in Michigan. Information must include county, township and section number or name of owner of farm if unable to furnish section number.

III. The owner agrees to notify the State Apiary Inspector, Department of Agriculture, Lansing, Michigan, within 48 hours after the bees or equipment arrive in Michigan.

IV. The owner agrees to pay to the State Department of Agriculture all charges involved for special inspection to be made as soon as possible after the bees or equipment are located in Michigan. Provided, also that if it is determined by the State Apiary Inspector that subsequent inspections are necessary at a later date, the owner agrees to pay the charges of one additional inspection. The charges for these inspections shall be at the rate of $5.00 per day for each inspector and at the rate of 5 cents per mile in going to and returning from such inspection, either from Lansing or from the location of the nearest assigned inspector.

Any bees on combs or beekeeping equipment imported into the state of Michigan in violation of section 13 of Act No. 26, Public Acts of 1935, or the rules and regulations promulgated herewith are subject to quarantine and the owner or shippers are subject to such penalties as provided by Section 18, Act No. 26, Public Acts of 1935.

These rules and regulations shall be effective on and after January 1st, 1936. All previous rulings and regulations that may be found in conflict with these rulings and regulations are hereby annulled.

In Witness Whereof, I have hereunto set my hand and affixed the official seal of the Department of Agriculture at my office, City of Lansing, this third day of January, nineteen hundred thirty-six.

(Signed) JAMES F. THOMSON,
Commissioner of Agriculture.

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
James F. Thomson, Commissioner

BUREAU OF AGRICULTURAL INDUSTRY
A. C. Carton, Director

Don P. Barrett, Chief of Apiary Inspection.

IMPORTERS' AGREEMENT

I, _____ of _____

County of _____ State of _____ do hereby agree to the Rules and Regulations contained in Michigan State Department of Agriculture Special Apiary Ruling No. 607 pertaining to the Importation of Bees on Combs or Used Beekeeping Equipment into Michigan in consideration of the fact I am granted permit to move _____ into Michigan.

List location of each apiary below:

Co.	Twp.	Sec. No.	Farm Owner

(Signed) _____

Death of E. E. Coveyou

Elias E. Coveyou, outstanding pioneer beekeeper of northern Michigan, died November 12, at Petoskey, after an illness of several weeks. He was 59 years of age.

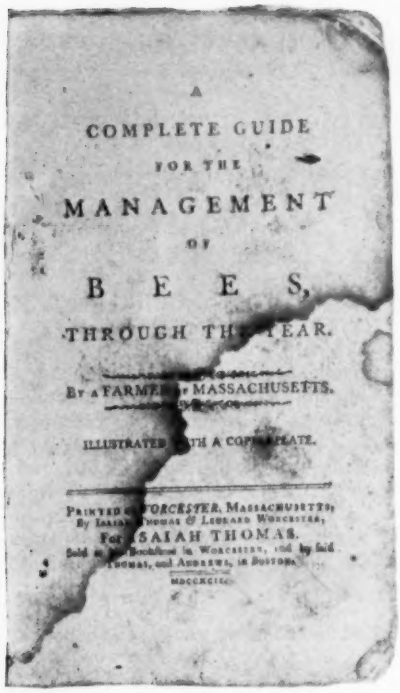
Better known as "Lige," Mr. Coveyou was prominent in beekeeping for forty years, operating around one thousand colonies. Being of a pioneering and inventive nature, he was quick to see new developments and among the first to try out new ideas, resulting in patents on automatic steam uncapping knives and extractors, and experimental trips into the South in winter.

Funeral services were held November 15 from the St. Francis Catholic Church, burial in the St. Francis cemetery.

Mr. Coveyou is survived by four sons, John, Lawrence, Arthur and Paul, all of Petoskey; a daughter Madaline, of Petoskey; four brothers, Jerome and Amil, of Detroit; Eugene and William, of Petoskey; and a sister, Mrs. Richard Gregg, of Bear Creek township.

Mr. Coveyou was an active member of the St. Francis Society and for many years a member of the Michigan State Beekeepers' Association. He was born in Emmet County, Michigan, May 4, 1876, living most of his life in the city of Petoskey.

Reported by Elmer E. Carroll,
Michigan.



A
COMPLETE GUIDE
FOR THE
MANAGEMENT
OF
B E E S,
THROUGH THE YEAR.
By a FARMER of MASSACHUSETTS.
ILLUSTRATED WITH A COPPER PLATE.
PRINTED AT WORCESTER, MASSACHUSETTS,
By ISAIAH THOMAS & LEONARD WORCESTER,
For ISAIAH THOMAS.
Sold at his Bookstore in Worcester, and by said
Thomas, and ANDREWS, in Boston.
MDCCXCII.

Waterstained title page of the first American bee book, published in 1792.

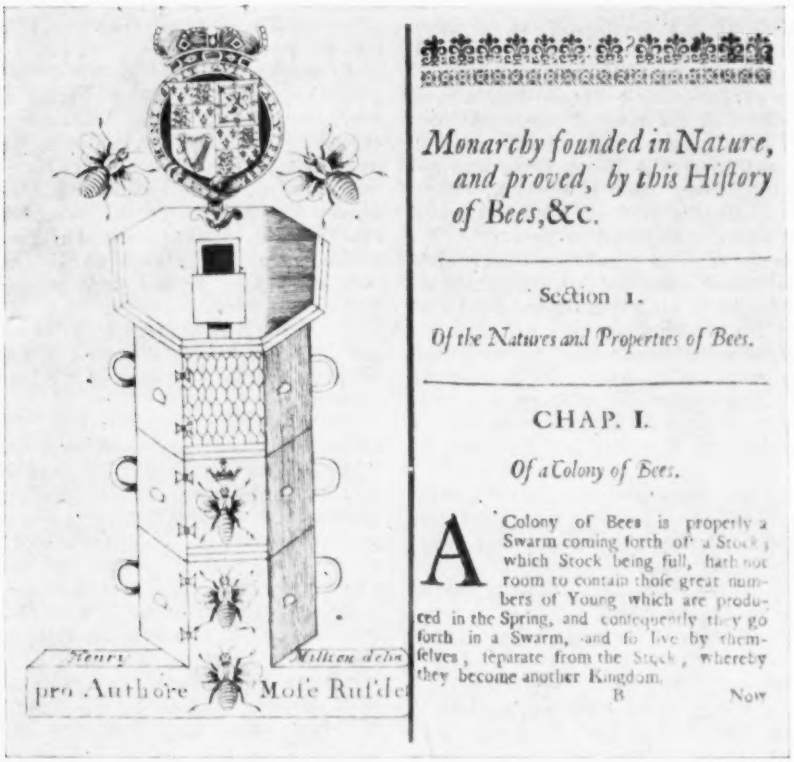
Unusual Memorial Fascinates Visitors

By William Briggs,
Wisconsin.

Visitors to the Miller Memorial Library perhaps rarely appreciate the devotion and care which have built it. It is good to get this report from one outside the industry.

WHEN was a queen a king? For hundreds of years down through the ages until the 18th century, Aristotle, Pliny, Virgil, and other great persons in history all believed the queen bee to be Rex, the king.

If one wishes to gain some knowledge on the fascinating story of bees, the most useful insect, let him visit the Agricultural Library of the University of Wisconsin at Madison. To his utter amazement, he will find about 3,000 volumes and pamphlets, besides nearly all the bee journals and magazines ever printed, instead of the few books which he may expect. Approximately four hundred feet of shelves, filled with the complete history and many modern books on bee culture, compose the Doctor Charles C. Miller Memorial Beekeeping Library.



Monarchy founded in Nature, and proved, by this Hiſtory of Bees,&c.

Section 1.

Of the Natures and Properties of Bees.

CHAP. I.

Of a Colony of Bees.

A Colony of Bees is properly a Swarm coming forth of a Stock; which Stock being full, hath not room to contain thoſe great numbers of Young which are produced in the Spring, and conſequently they go forth in a Swarm, and ſo live by themſelves, ſeparate from the Stock, whereby they become another Kingdom.

B Now

Frontispiece and first page of Mose Rusden's book on the discovery of bees, published in 1689.

Deeply impressed that such an enormous amount of literature could be written about a single insect, I asked Mr. S. C. Hean, the librarian, what he considered the most unusual books in the collection. He removed several valuable works from the fireproof cases, and chose a small 4x6 inch volume from a worn, manila envelope.

"This is the first American bee book, complete except for the frontispiece," he said as he fingered the yellow, waterstained pages. "Only five copies are know to exist of this forty-six page publication. See the title page, 'A Complete Guide for the Management of Bees Through the Year.' This was written by a farmer of Massachusetts and published in 1792 at Worchester, Massachusetts."

In glancing through this treasure which is written in oldstyle English, the similarity between the "s" and the modern "f" makes reading somewhat difficult. The following paragraph illustrates this old-fashioned writing:

"BEES generally fwarm in the monthf of May, June, and July. Swarmf which come out in July are commonly fmall, and the feafon is then too far advanced. With the utmoft induftry, they will fel-

dom be able to procure provifion enough for the winter."

Another valuable old book was published in London in 1689. It was written by Moses Rusden, the bee master to his majesty, the king. The book, "A Further Discovery of Bees," treated the nature, government, generation, and the preservation of this insect. Rusden says that the king is the only male in the hive, and that all workers are females. In reading Rusden's book, one finds an interesting account of the monarchy founded in Nature. Several unusual drawings are illustrated with copper plates.

Mr. Hean, custodian of this, the world's largest collection of bee books, invites any interested person to visit and use the bee library which is located in the new East Wing of the Agricultural Library in Agricultural Hall. He said that Prof. H. F. Wilson, entomology department, is in charge of the memorial which is in remembrance of Dr. Miller.

Dr. Miller received his doctor's degree in medicine at the University of Michigan in 1856. The failure of his health prevented him from practicing medicine for but five years, and when he was thirty years old, he began keeping bees in the outdoors. He developed his new vocation to such an extent that at one time he managed more than four hundred colonies of bees. When he was eighty years old, one of his hives produced more honey than had ever before been recorded. This was indeed an honor for one of the best known and well liked of American beekeepers.

Writing for bee and agricultural journals, he earned his way to editor of "Gleanings in Bee Culture," and was also associate editor of the "American Bee Journal." Dr. Miller held, at one time or another, nearly every office in the National Beekeepers' Association.

Following his death in 1920 at the ripe old age of eighty-nine, his fellow members in the association concluded a library would be a more lasting and fitting memorial than could be bestowed in any other way.

"Five men were appointed to serve on a committee for deciding the location of this unusual memorial," Mr. Hean mentioned. "They all wanted it located in their own state, but no decision was reached so all members named a second choice, and Wisconsin was unanimously chosen as the home of the library."

"'Wisconsin Beekeeping,' at the time the official organ of the Wisconsin association, was offered in exchange for other publications. 'The American Bee Journal' and 'Gleanings in Bee Culture' contributed many back numbers," Mr. Hean said. "Many old copies of nearly every bee magazine were gradually secured."

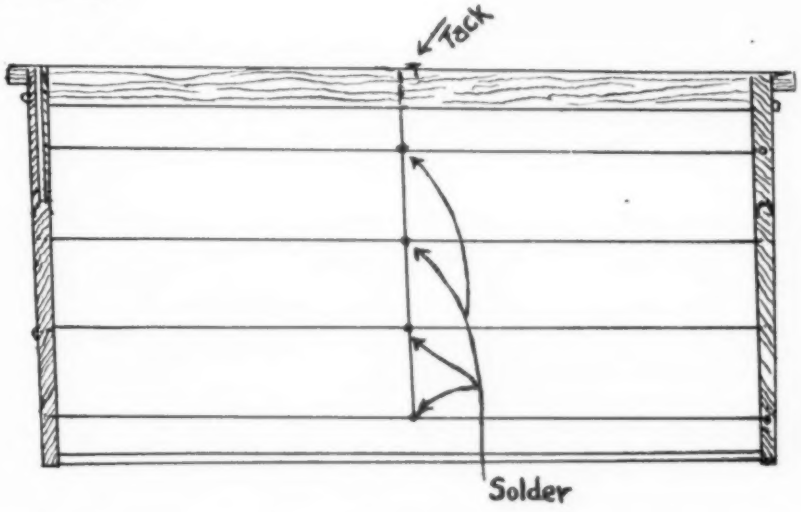
Approximately eight hundred volumes of bee journals offer many interesting items. The Germans have been quite prolific writers, and some eight hundred books have been written in their language and are found in the memorial. Incidentally, the Germans probably should be great writers as it is believed that we got our first bees from them.

Perhaps the most unusual piece of

(Please turn to page 77)

Another Frame Wiring Scheme

By Elmer G. Carr,
New Jersey.



SINCE there have been so many plans for horizontally wiring frames it seems hardly possible that anything new could be suggested. However, one came to the writer's attention last year, one which he does not recall seeing before.

The area on a comb most subject to damage by sagging and by breakage in the extractor is about two inches below the top bar extending about three inches each side of the center. Wired foundation obviates damage from either of the causes mentioned but is subject to damage by the bees gnawing out the wires at the bottom ends when they are not in condition to build comb readily. Sometimes also they will gnaw out the wires from combs fully built out.

If the wires in wired foundation could be so placed that they were in only the upper two-thirds of the sheet the damage by gnawing probably would not occur.

If one could visit the apiary at frequent intervals and give foundation only when conditions were favorable all might be well. However, with apiaries many miles from home and an uncertain honeyflow to reckon with this is not possible. Therefore it is extremely desirable that frames be so wired that sagging and extractor damage will be reduced to the minimum and so that bees will not gnaw out the wires.

The wiring used for this season which so far has given perfect results is the regulation four horizontal wires and in addition one vertical wire threaded through the top bar and extending to the lower horizontal wire. Since it is difficult to make the vertical wire exactly meet the horizontal wire it is allowed to extend about one-fourth inch below the lowest horizontal wire.

At each intersection of the vertical wire a small drop of solder is applied with a small electrical soldering copper. Then the wire projecting through the top bar is given a turn around a small tack, the tack driven home and the wire broken off. Then the end of the vertical wire projecting below the bottom wire is snipped off.

This requires considerable time but the resulting comb is such that one feels justified in using the time.

One person pointed out that it is impossible to imbed all four wires electrically at one time with this arrangement. This is true. It is also true that the writer has never seen a job of imbedding when all four wires are imbedded at one time which pleased him.

Each horizontal wire is imbedded separately, lastly the vertical wire also separately.

A genuine Egyptian apiarist, little Miss Hoda Abushady, daughter of Dr. A. Z. Abushady, editor of "The Bee Kingdom" at Matarich Suburb, Egypt. The hive in use is the standard Langstroth which has become the official hive of Egypt.

Those Grey Bees

By A. Z. Abushady,
Editor The Bee Kingdom,
Egypt.

Partial view of the Government Apiary and Experimental Station, at Giza, near Cairo. The English pattern hives here shown are being replaced by Langstroths, in conformity to the decisions of the Ministry of Agriculture.

Italian bees have reigned supreme in Australasia for long years. Grey bees were not tried except individually and on a small scale, owing to importation difficulties and also because of the comparative scarcity of their supply from their mother country, particularly from Upper Carniola. When these difficulties were overcome within recent years and the trial of Carniolans on a comparatively large scale became permissible, they simply created a sensational revolution in Australasia. The same is now happening in Egypt.

Needless to say, bee culture in both Australasia and Egypt is conducted on commercial lines, that is with the fullest need of those "good performers when it came to bringing in the harvest." Therefore, Carniolans would not have been tolerated had they not given the finest account of themselves, particularly when Italians are fully available as well. It must be remembered also that in Egypt the three standard leading races (Carniolans, Caucasians and Italians) are equally championed by the Government and by the B. K. L., yet almost invariably beekeepers in Egypt are favoring Carniolans in particular and grey bees in general.

In vain have I found in the literature any evidence to show that grey bees were tried before **on a large scale** in America, but rather the reverse. I attribute the present growing interest in them on your side to the greater tendency to test them (whether Carniolans or Caucasians) on a large scale, and, so far as I can see, the results appear to be going in harmony with the favorable experiences in Australasia, Egypt and other parts of the world which ventured to utilize grey bees on a large scale.

That the Italian bee in America is a good bee, after years of careful

Temporary hives and traveling boxes used in Egypt. Picture taken at the Central Apiary of the B. K. L.

An apiary of modern hives at the Giza Experimental Station.

Beehives near Tator, Greece.

selection, does not show that America cannot produce even a better grey bee with similar attention. As it is, grey bees have beaten some of the good American Italians, as shown by some of your leading writers whose honesty of purpose is beyond dispute and whose experience is fully admitted.

I do not agree that pure Italians are not likely to be mixed with other yellow bees, for I have often seen Italian-Cyprians of good disposition easily mistaken for pure Italians. The same happens with Carniolans if crossed with Caucasians or with the common brown bee, except of course to the initiated eye. As a matter of fact, those ungentle "Carniolans" are most probably dark crosses, since pure Carniolans (like pure Caucasians) are **always** gentle under normal weather conditions and are most easily subjugated by smoke, if there is the least need to do so.

As to the adaptability of Carniolans, this is also noticeable with other universal races, such as Italians and Caucasians. We have Carniolans bred most successfully and productively in the very hot oases, and at Suez, as well as in the mild and cold parts of Egypt. These facts could not have been revealed were it not for the extensive trials made in Egypt which, even now, have not been approached in any way in America. The impressive success which Carniolans have achieved in Egypt has been an encouragement to other warm countries, notably Iraq. Syria, India and Ceylon to follow suit, and the Egyptian government is facing an overwhelming demand for these bees which have stood the test here so well for successive years.

AS all human bodies need a good house cleaning in the spring, persuade the kiddies to leave off cane sugar candies for a time and encourage them to eat generously of honey sweets! Bran muffins spread with honey, or made up with honey in the dough, make a delightful mild laxative. A decided improvement on our old friend the castor oil bottle!

Lida Keck-Wiggins

Unusual Memorial Fascinates Visitors

(Continued from page 75)

work in the collection is a neatly written manuscript copy in German, taken from a book published in 1586. Some person, undoubtedly, could not afford to buy this book so he copied it in 1682. All of the original volumes are believed lost. The headlines of the written copy were very carefully and skillfully printed, and the eighteen chapters in script must have been a long tedious piece of work.

The oldest book of the group, published in Florence, Italy, nearly three and a half centuries ago in 1590, bears the following inscription:

La
Coltivazione
Del Sig. Lvigi
Alamanni,
& le
Api Del S. Giovanni
Rvcellai

The translation discloses that the book is composed of two Italian didactic (instructive) poems entitled "The Cultivation" and "The Bee" written by Luigi Alamanni and Giovanni Rucellai, respectively.

The outstanding contribution to the Miller Memorial Library is the Col. Walker collection of bee books added a few years ago. Col. H. J. O. Walker, an Englishman, collected bee literature as a hobby. Not only did he keep books written exclusively about bees, but he included many rare volumes containing only a chapter or two on this subject. Consequently, many interesting accounts of farming, nature, and other subjects are available.

The Walker collection, all neatly bound, was estimated by Col. Walker, himself, to be worth about $1,750. It was added to the memorial by the hard work of Prof. Wilson, and by the generosity of a Badger state alumnus. The nucleus of this collection was a library formed by Alfred Neighbour, maker of bee appliances, and author of "The Apiary," known to most men, and published in London in 1865. Many other donations have been received by the Miller library.

The collection is maintained and kept by a $2,000 endowment, and Mr. Hean said that the contribution and sale of honey from the individual members of the Wisconsin association is an additional source of revenue.

A treasure chest for beekeepers, helpful hints for the amateur, a rendezvous for the historian, and a pastime for the unemployed, the Miller Memorial Library intrigues all visitors.

Concluding Report of Southern Beekeepers' Conference

Bees By Express

The interest shown by the express company on the difficulty in shipping bees by express was evidenced from the fact that four representatives of the express companies were in attendance at the meeting. Mr. G. Sadler commented on the much desirable results during 1935. He remarked that shippers in the South should time their shipments to arrive at destination on other days than Saturday and Sunday. He also recommended not specifying any routing as the express agents at central points themselves are far more able to make a routing than is either the queen shipper or the receiver at the other end. Central handling points have a special route guide to determine the best routing and special meetings and special instructions are given to agents for the handling of such package shipments.

Mr. D. M. Grimsley, Traveling Commercial Agent of the Railway Express Agency located at Memphis, Tennessee, gave a very interesting talk. Mr. Grimsley's specialty is the handling of shipments of pecans, bees and frogs.

Risking some opposition from package shippers, he stated that many of the old ideas on shipping as recommended and carried out by both shippers and receivers in the North, had been exploded by the express company's experiments during the past two or three years. For instance, sun exposure is not very vitally important in the loss of bees. He made many experiments on this.

Mr. Grimsley states that ventilation is needed and as the temperature rises above 80 degrees, all the ventilation possible should be given. When the temperature arrives at 90 degrees, the bees should be sprayed, not directly upon the package but a mist made to float into the package, giving them moisture rather than water.

When loading in the car, the packages should be set away from the edge of the cars and the cages should be loaded the long way. He also urged allowing the express company to do its own routing.

Mr. Grimsley, while not definite as to package sizes, stated that there was a vital importance of having uniformity of packages so that they could be piled satisfactorily in express cars and not crowded together in one instance and wide apart in another. He also stated that contrary to many assertions, sugar syrup does sour in transit as they had made definite tests to determine this. It is also Mr. Grimsley's suggestion that bees are not as hardy as they have been in past years.

Marketing Agreement

Mr. R. H. McDrew of the A.A.A. at Washington, D.C., discussed the Marketing Agreement. Mr. McDrew stated that the Hoosack Mills case will have no effect on the marketing agreements under the A.A.A.

McDrew stated that anyone who had signed the Marketing Agreement for package bees and queens in the first place is still bound thereby, just as under any other legal contract. Such contract is binding until released by the Secretary of Agriculture upon application by a large number of package shippers or receivers.

Bookkeeping With Bees

T. W. Burleson of Waxahachie, president of the American Honey Producers' League urged that there should be no overbooking on package bees or queens. He stated that never should a breeder accept over 75 per cent of what he thinks he can ship at a definite time and that the dates on shipment of packages should be absolutely recorded in the shipper's books so as to be able to advise definitely any buyer as to what they may expect in the way of deliveries.

Mr. Burleson also suggested that more attention should be paid to credits and that shipments should not be made indiscriminately to buyers in the North where satisfactory credits were not available.

In other words, Mr. Burleson suggested that the package business should be run as any other business and that creditable buyers should be given proper credit attention but the package shipper should not furnish capital for the northern man to work with.

Introducing Packages

N. C. Jensen of Macon, Mississippi, gave some experiences on tests with both express and truck shipments. He has tried truck shipments with no feed can also. Where truck shipments are attempted without feed cans, it is necessary to use far more water in delivering shipments than otherwise.

Mr. Jensen preferred shipping the queens in the package in dry cage without attendants. He recommends all queens being clipped and that queens be kept in the cluster when received until the package is set out.

The packages can be painted with a syrup (50-50) and the bees will gorge. Queens may then be liberated immediately with a few bees shaken in front of a hive.

Best judgment should be used in releasing on account of weather conditions. During cold weather, an empty super on top and shaking the bees out and releasing the queen immediately over the frames, is better than taking out frames and placing the cage down in the brood chamber. He recommends the pepper box feeder.

American Honey Institute

Mrs. Jensen of the American Honey Institute was present for the second day of the meeting. Mrs. Jensen had just finished a 45-day trip through western states, going via the north route down to California and back the southern route. Mrs. Jensen reported great enthusiasm over the Institute work and good response from beekeepers wherever she had visited.

She reported that work needs to be done on the standardization of honey, particularly for use in cooking and for baking on account of the fact there is a large variation in flavor and in color.

Another point was raised which has not been mentioned sufficiently in the past, that is that honey varies greatly in water content and in many cases this is the reason for failure with recipes calling for honey in baked products. Mrs. Jensen stated that it was absolutely necessary to have honey of a certain moisture content or to vary the recipe in order to have satisfactory results. She found this when attempting recipes in the high plains areas where honey is particularly heavy and short of moisture.

She also reported some failures with recipes due to too much beating of flour rather than kneading the flour together.

Oregon and California have new standardization laws which are quite technical and by which the shipper has to give the source of nectar, etc.

Her report on the single item Honey Krushed-Wheat Bread shows that four pounds of honey is used in every 100 pounds of flour and that, according to the report given of the volume of the bread on the market today, it would take in the neighborhood of six million pounds of honey for this kind of bread alone each year. This shows the extent to which the demand for honey in the baking trade has gone.

She also reported on the General Mills $250,000 campaign advertising Honey Chocolate Cake in connection with their Gold Medal Flour, all

started by an original contact in 1929.

The American Honey Institute is anticipating an edition of 50,000 of the booklets "100 Honey Helpings" which are very desirable both from the recipe standpoint as well as from general information on constituents of honey, etc.

Legislative

Mr. K. Hawkins of the Legislative Committee reported that his committee had fostered only one project and that was a bee field station for the North Central States. A provision for such a station is carried in the Department of Agriculture budget and we understand that hearings are now in progress.

Officers

The business meeting at the end of the session resulted in the selection of Dr. F. L. Thomas of College Station, Texas, as president for 1936. E. G. LeStourgeon was selected as secretary and the place of meeting was determined as San Antonio, Texas, on November 20 and 21 in conjunction with the American Honey Producers' League and American Honey Institute. Vice-presidents for 1935 were re-elected for 1936.

Resolutions adopted at the meeting are appended, herewith.

WHEREAS: The Marketing Agreement for Package Bees and Queens has been of great benefit to the shippers of bees and queens, through price stabilization, by changing the red-ink years of 1932 and 1933 into reasonably profitable years of 1934 and 1935; and

WHEREAS: it appears that this Marketing Agreement will, if its provisions are observed by the industry, continue to be of substantial benefit to the industry during 1936 by preventing destructive price cutting and by protecting the shippers from being over-reached by some large buyers who sometimes make misleading representations as to prices quoted; and

WHEREAS: it is believed that over 90 per cent of the shippers favor the Marketing Agreement and recognize its benefit, but, that due to fears that other shippers may not be complying fully with its provision, a few of such shippers are failing in some respects to comply with the terms of the Agreement; and

WHEREAS: it is essential that all shippers be required to comply with the Agreement otherwise the whole program will break down;

THEREFORE BE IT RESOLVED: that the Control Committee be requested to respectfully urge the Secretary of Agriculture to take such steps, in the Federal Court or otherwise, as may be necessary to require all shippers to comply with the provisions of the Marketing Agreement and with all resolutions of the Control Committee made pursuant to the provisions of the Agreement.

Introduced by E. C. Bessonet, Unanimously carried.

— o —

WHEREAS: the need of investigation in the problems of bee culture peculiar to the Central States has become more and more apparent, and

WHEREAS: the problems of bee culture are such that investigations both at the point of origin and destination of the shipment of package bees are necessary to the future welfare and development of this great industry, now

THEREFORE, BE IT RESOLVED, that the Southern Beekeeping States Federation in Conference assembled at Nashville, Tennessee, December 2, 1935, do request that a Field Laboratory be established in the North Central States by the U. S. Department of Agriculture, and that a copy of this Resolution be sent to Secretary Wallace with the request that he give it his earnest consideration for the earliest possible action.

Southern States Beekeeping Conference, Nashville, Tennessee, Dec. 3, 1935.

— o —

WHEREAS, the beekeepers of the Southern States have from time to time called attention to the great damage done each year by the careless and wasteful habit of burning off the countryside, thus destroying valuable honey resources of the southeastern states, and

WHEREAS, the people of Florida have become aroused over this situation and are taking corrective measures,

THEREFORE BE IT RESOLVED, that we commend the Governor and the Legislature of Florida for the efficient work of the fire control board recently appointed by Governor Scholtz and commend this policy to the adjoining states where less efficient control methods are practiced.

Southern States Beekeeping Conference, Nashville, Tennessee, Dec. 3, 1935.

— o —

WHEREAS, God in His infinite wisdom has called to the Great Home Yard above, not built with human hands, many of His workmen whose kindly faces and generous thoughts are missed at this meeting, and

WHEREAS, many of these were earnest workers in our craft and always ready and anxious to serve their beloved fellow beekeepers,

THEREFORE BE IT RESOLVED, that we bow our heads in memory of these beekeepers and convey to their widows and friends a message of sympathy and condolence at this time.

Southern States Beekeeping Conference, Nashville, Tennessee, Dec. 3, 1935.

WHEREAS, it is the firm conviction of the beekeepers of the Southern States Beekeeping Federation, that the present method of disease control should be strengthened, and

WHEREAS, certain Southern States, namely Missouri, Arkansas, Virginia, West Virginia and others have no adequate inspection service, and in the case of Missouri at least does not even have an apiary act or any law pertaining to the control of bee diseases,

THEREFORE BE IT RESOLVED, that this conference pledge its assistance to the beekeepers of the States affected and appeal to them to see that adequate control measures are adopted or provided in every State.

Southern Beekeeping Conference, Nashville, Tennessee, Dec. 3, 1935.

Why Sweet Clover Fails to Yield

By C. E. Phillips,
Ontario.

Frank C. Pellett has asked this question many times and I am reticent to pit my speculation against his wide botanical knowledge.

My boyhood days were spent in a maple sugar district. It is common knowledge that the maples will give an extended flow of sap when freezing nights and thawing days prevail. But let warm nights and days continue for one week and the flow is over. Should a young winter return, however, the flow will again return and may be quite extended, providing the buds are not too far advanced.

The northern states and western Canada are noted for the cool and **sleepful** nights while farther south and in Ontario we "jump right in between the sheets, with nothing on at all."

My experience in Saskatchewan, when there was a stand of sweet clover, gave three kinds of flows, viz.: medium periodical rains with cool nights, heavy flow; a dry spell starting just before blossom with warm nights and no rain, light flow; much rain throughout whole season, lighter crop.

Here in this section of Ontario, for the first time in four years, sweet clover has given a fair yield. Winterkill and drought blotted the Dutch white clover right out. Sweet and other clovers yielded up to July 18th. While the weather was very warm during July, the nights for the first half were **sleepful.** The honey is light in color, mild in flavor with sweet clover aroma but lacking in the tang the previous three crops have had. I like it better.

I wonder if many flowers are affected by cool nights, just as the maples, in producing a flow?

Report of Iowa State Meeting at Ames, Iowa

By Roy A. Grout,
Illinois.

The Iowa State Beekeepers' Meeting was held at Ames on November 21, 22 and 23. It was well attended, one of the best meetings Iowa has had for years. Many of Iowa's prominent beekeepers were there and some from out of state.

Dr. Lloyd R. Watson of Alfred, New York, was the principal speaker. He had three talks which are to appear in the Journal with titles as follows: "Are We Ready for a New Bee?"; "What the Scientist Can Contribute to the New Bee"; "What the Beekeeper Can Contribute to the New Bee."

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Robert Clark of Mitchellville—"A Spraying Program and Bees." Mr. Clark has been an orchardist for years and did not use bees for pollination purposes. The first year he tried package bees in his orchard, he doubled his apple crop. Since then he has used bees every year with startling results, the most significant being an increase in the crop of Delicious apples to nine times the previous crop.

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Dr. E. I. Fulmer — "Studies in Granulation of Iowa Honey." A review of the work already published in the American Bee Journal, on adding water to honey as the means of controlling granulation. There was some discussion in regard to whether or not it was lawful or advisable to do this. Dr. Fulmer points out it is contrary to the Pure Food Law but compared it with the work done in the Bureau of Chemistry on filtering honey. Dr. Fulmer is of the opinion it is not out of the way to add a small quantity of water.

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Dr. J. N. Martin—"Clover Pollination by Bees." The recent years of drouth have affected the seeding of red clover. Farmers, however, are reluctant to give up red clover as a crop. At present, there is a shortage of seed which is responsible for the high price. The average production of red clover per acre along the west coast is twelve bushels. Here one bushel per acre.

Dr. Martin points out this is due, of course, to lack of pollination. It has been found that the length of corolla tubes in certain areas of large production are the same as length of corolla tubes here. He also states there is no more nectar secreted. The honeybee is an efficient and effective agent of pollination but is attracted to other plants in preference. He suggests a concentration of bees to save the situation. He mentions the work done in Russia which records the use of somewhere around one hundred colonies per hectare.

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Prof. C. A. Iverson—"A Milk-Honey Confection." At first, Prof. Iverson admits, he was not interested in the use of honey in connection with dairy products. The Department had done some work on honey in ice cream but the flavor of honey entered in. The product was fine as long as it was only used in making a honey flavored ice cream.

The present milk-honey confection, developed by the Dairy Department, was more or less stumbled upon in the laboratory in an experiment in which they tried to dry sweetened condensed milk. Nothing came out of the dryer. On opening it, it was found that there was a cheeselike mass coating the rollers. They tasted it and found it good. Then they tried various ratios of sugar and milk, using the nursery school for testing the product. They experienced difficulty in using combinations of sugar and milk because the product dried and was granular.

In attending dinner at the nursery school, Prof. Iverson heard a specialist address the crowd advising children be given all the natural sweets they liked such as honey, and maple syrup. This gave him the idea of using honey in combination with milk in the dairy laboratory. Then they proceeded with various combinations and found that honey, due to its hygroscopicity, made a product which had fine qualities and a fine texture.

The Iowa State College is taking steps to protect this product from exploitation. Several candy concerns have been anxious to obtain the process. The Department has developed a honey chocolate bar in which half of the honey is replaced with chocolate. The confection is half honey and half milk. One bar sells for 5 cents and contains the equivalent of a glass of milk. It is a concentrated food on which one could live for a long time. It has fine keeping qualities. One package having kept fourteen months and still retaining the original condition and flavor.

T. W. Millen — "Honey Bees in India." Millen is a student in Ames, taking veterinary medicine. He discussed **Apis dorsata** showing specimens of bees and comb. These bees are migratory, migrating from the plains to the hills. They live in trees and under rocks, building big combs sometimes three feet by four feet. Mr. Millen has seen as high as thirty swarms in a single tree. The bees are dangerous when disturbed and have been known to kill elephants. The beekeepers of India are in the same class with snake charmers and conjurers. The larvae of the bee are eaten by the people, Millen stating he had tasted them and that they are not bad. The honey is sold with the larvae of the bee in it so people may see it is really honey.

Another species of bees, **Apis floria,** build comb about the size of a man's hand but they are not commercially important. There is also a species called **Apis bombica. Apis indica** is the only bee in India which adapts itself to commercial honey production. It is a little smaller but looks much like the Caucasian bee. It is characterized by a whiter brood cap which has punctures in it. The average yield is only about six pounds of honey per year.

He also mentioned the enemies of the bee in India, particularly a wasp which hovers about the hives and captures bees as they fly to the field like a hawk preying on smaller birds. They are only able to catch the bees occasionally. The flight of the wasp makes a peculiar droning sound that announces its presence and the bees, hearing them, come out of the hive, form a solid formation at the entrance, remaining perfectly still except that occasionally they all move together as though they were shaking themselves. Millen thinks the wasp considers this formation as the body of a large animal of some kind and so the wasp stays away and out of the entrance.

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Dr. O. W. Park—"Results of 1935 Disease Resistance." See full article in this issue.

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E. M. Cole—"Does Parthenogenesis Exist in the Honeybee?" Mr. Cole does not seem to think that there is such a thing as parthenogenesis in the honeybee. His theory is that at the time of mating, some of spermatazoa fail to enter the spermatheca but ascend to the ovary. Here they fertilize all the eggs and these eggs are drone eggs. As these eggs come down, the queen lets out a sperm which enters the egg, changing the sex to female. If the queen is over twenty-one days old at the time of mating, the spermatheca will not operate and so all her progeny are drones. This talk raised a great discussion and quite an argument. Dr.

Park pointed out finally that in all parthenogenetic insects, the male had only half as many chromosomes as the female. In all other organisms in which parthenogenesis occurs, one sex has one less chromosome than the other. There seemed to be no reply to this argument.

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Dr. Welhousen — "Breeding for Disease Resistance." Dr. Welhousen described the successes in breeding plants resistant to drought, rust, wilt, etc. He mentioned three phases of resistance: A plant which is resistant may be an "escape" due to environmental conditions like wheat sowed late or early which is not susceptible to rust because of the time of planting. The second phase of resistance is due to morphological characters either internal or external such as thickness of cuticle on leaves, size of stomata, wax coating of leaves, etc. The third phase of resistance is the chemical factors such as plants being high in cell building carbohydrate materials resulting in sturdy resistant plants.

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This meeting was held in conjunction with the Iowa State Horticultural Society. Officers of the Iowa Horticultural Society for 1936 are: Frank Pellett, president; Herman Knutson, vice president; R. O. Herrick, secretary and treasurer. The Iowa Beekeepers' Association plans a summer meeting at the sub-station at Pellett's Gardens at Atlantic.

Changes in Location

By W. E. Lindsay,
Colorado.

We see occasional comment on the failure of what was once good bee territory. Regions which were once flush with honey plants are now poor. It seems this change may happen anywhere. We read of it in the white clover regions. The causes are many: Insects, plant diseases, droughts, crop rotation, and changes in farm cropping systems.

The great honey source of the intermountain region and irrigated region has been alfalfa and sweet clover for white honey. Auxiliary flows are from yellow bloom such as dandelion, sunflower, various rosin weeds, and rabbit brush, which sometimes colors our white honey.

We do not get near the yields we once got when alfalfa had no insects in it. We once produced two or three times the honey per colony we now produce. Alfalfa weevil blights the bloom of first crop alfalfa so we get only a living for the bees from it.

This season the alfalfa looper worm came which pretty near put the finishing touch on first crop alfalfa. Sweet clover through many years has been a high producer of nectar but in recent years there seems not to be such an abundant growth of it as previously so now our chief dependence is second crop alfalfa which is not much affected by weevils or worms because the generations of insects are over by the time the second growth is coming on.

The decline in yields from alfalfa and sweet clover has been going on since 1927 which was a banner year. Out here the great builder of colonies in the spring is dandelion which has become abundant and which was not here forty years ago. Nearly all dandelion honey goes into the brood before the white flow comes on. Fruit bloom is of no use on account of arsenical sprays and we have to keep strictly out of the orchard districts. Some beemen were absolutely put out of business by poison years ago before they learned to stay away. Writers mention lately the uncertainty of yield of most any plant under different conditions of soil, climate, temperature, etc. Mention has been made of large areas of alfalfa in the East with not a bee on it while here in the intermountain region, it is at its best for climate and soil are just right for it, as it was in Asia its original home.

Plants that are great yielders in some regions are worthless in others. We read of smartweed being one of the great honey plants of Nebraska, the Spanish needle of Illinois and Indiana. Both plants are spreading along the ditches and wet areas here, being accidental introductions from the East, yet we never see a bee on either one of them. Something has been said about the introduction of eastern and foreign plants as honey plants which turn out to be noxious weeds, a thing to be avoided by all means.

No weeds have ever been introduced here from the East as nectar plants. Many very bad weeds have been introduced accidentally, among them morning glory or bindweed, whorled milkweed, pepper weed and poverty weed. The last being one of our very best summer pollen plants.

Many bad weeds like Canada thistle have never arrived. One of the oldest settlers of the Uncompathgre Valley has said that he was the unwitting means of starting the morning glory in garden seed from the East since the morning glory got out of bounds and went wild.

How's This for Service?

I live in northeast Kansas, twenty-eight miles from St. Joseph, Mo., and have grocer customers there. I've quit monkeying with comb honey and sell only five-pound pails and one-pound bottles. When I land a customer I really don't try to keep him. I try, rather, to serve him so he'll want to keep me. How do I do it? When I sell him a batch of pails and bottles I don't drop him like a hot potato, thinking that my sale is complete. I call around occasionally to see how things are going honey-wise. Here is an example. Last year one fellow stacked the pails on the floor, and before long a lot of labels were dirty at the bottom, and otherwise skinned up. I sorted them out, put on new labels, and made my product look appetizing. I always am interested in how it is displayed, for I know that consumer-buying results in part from suggestion. If it's out where people can't help but see it, every passer-by becomes a potential buyer.

Another customer had bought rather freely of pound bottles. Some months later I found he had left over twenty-one bottles all blotched up with crystals; an unsightly few were on the shelf, the rest of them in the basement. I took them home, put them under hot-water temperature to 160 degrees, applied new labels, and lo!—there were twenty-one handsome bottles for my customer. On that same shelf were bottles gone to sugar, from "big packers"—and "no one to do them honor."

There's only one string to my product, I tell my customers: If it isn't first-class and doesn't go with the trade, it's my honey. And I've never had to cough up on any of it yet. My interest in my product goes all the way to the consumer. It's an asset of the highest value in marketing honey because it doesn't fail to work.

H. W. Stewart,
Kansas.

Experiment in Cross Pollination

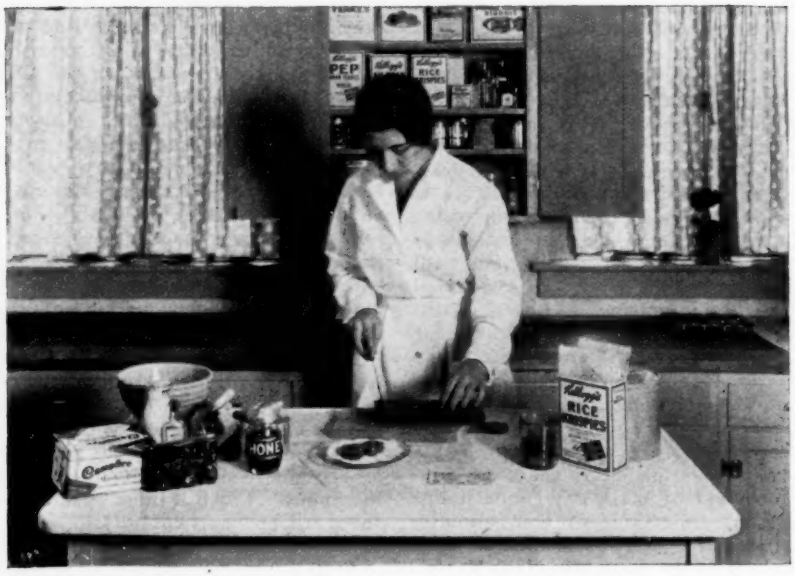
A trial was made of a new method of cross pollination of fruit trees in the Yakima Valley this spring. It was not entirely satisfactory, according to William Sires, a Union Gap beekeeper, who aided in the experiment.

Trays of pollen were put in the entrances of hives. As bees moved across the trays, pollen clung to them and was carried to the fruit blossoms. The trays closed the hive entrances slightly and retarded the flight of bees some. Also the ventilating by the bees at the entrance tends to blow away much of the pollen.

Bees have been used in the Yakima Valley for twenty-five years for pollination purposes. Most of the bees are rented. Cherry orchards require more bees than other fruit. Two to five colonies to the acre are used in the cherry orchards.

I. L. Neill,
Washington.

Kellogg on the Job



THIS picture shows a view in the Kellogg kitchen. Considerable experiment work with honey is done in developing recipes for honey with Kellogg products.

Here is one of the Kellogg recipes developed in this way:

Honey Krisp Rolls

1 cup Kellogg's Rice Krispies (rolled and measured after rolling)
½ cup chopped dates
¼ cup chopped nut meats
8 marshmallows (cut in pieces)
¼ cup honey
½ pint whipping cream
½ cup rolled Kellogg's Rice Krispies (for outside of roll)

Mix all ingredients except whipping cream and ½ cup rolled Rice Krispies. Whip cream until stiff. Fold mixture into whipped cream. Shape into a roll and cover with rolled Rice Krispies. Line a pan with waxed paper, sprinkle with rolled Rice Krispies and place roll in pan. Chill from 4 to 6 hours. May be kept for several days. When ready to serve slice with a sharp knife, top with whipped cream sweetened with honey and garnish with a fresh or preserved strawberry or cherry. Yield: 10 to 12 servings.

"Nectar" from the Cornfields

By Alfred H. Pering,
Florida.

In the Postscript for September Mr. Frank C. Pellett says: "It is too bad our Iowa cornfields do not yield nectar. The acreage would be sufficient to provide honey for the world." No doubt all the readers of the Journal know just what Mr. Pellett meant when he wrote those two sentences. However, when one stops to think what they could be made to mean, he may be sure a great many beekeepers would agree that it is a good thing that Iowa corn does not yield sufficient nectar to supply the world with honey, else where would they be as producers of other kinds of honey and what would happen to their market!

I am reminded of an experience of mine a number of years ago. I was then a youngster, and the bicycle was at about the height of its popularity. Harvest had closed on my father's farm in Indiana, and I had been turned loose to visit relatives in an adjoining county. I was allowed this visit as a sort of reward for some real or imaginary service, and I took to the wheel with all the zest that can be imagined.

It was in early August and the weather was hot. On rainy days and nights I had heard the harvesters remark about the wonderful growing weather for corn. The expression that the corn was growing so fast you could hear it grow was more or less common. The idea sounded fishy to me and I dismissed it as just hired men's talk.

One fine day I was pedaling along the hard upland clay roads. The going was easy there, but after I had crossed the Eel river I got into the cornfields of the river bottomlands where the corn had grown out very, very close to the roadway, and the hot narrow pass through the corn made pedaling much harder. I soon grew weary, and there being no trees at all to afford shade, I leaned my bike against a sturdy stalk of corn and went deeper into the field, seeking more shade and a place to rest. Sitting was more restful than standing, and after I had been sitting for some time I noticed a rather distinct popping noise. It reminded me of that talk of hearing corn grow. After listening more intently, I concluded that must be it. I tried to locate the noise but finally gave it up until I heard the noise quite near me, and turning my head quickly in the direction from whence the "pop" came, I saw a long crack between two joints in a large stalk of corn, not far from the ground, from which the corn juice was oozing.

Fascinated I watched that crack until the juice had dried. In the meantime I had heard the hum of honeybees but thought nothing of it as I had quite a number of colonies of bees at home and knew bees eagerly gathered pollen from the corn bloom. Directly in front of me a large, healthy stalk of corn went "crack" right before my eyes. A slit some seven or eight inches long appeared and the corn sap began to ooze. A bit of it ran almost to a joint before it dried. As I watched, a bee alighted and began to suck up that juice. She seemed to have a full load; for when she departed she flew upward and sailed straight away. I watched and listened for quite a while longer and was able to hear plenty more popping of the corn stalks but only once more was I able to see a bee get another load of corn juice.

I must have thought little of the matter at the time, as I never made any observations as to whether my own bees ever were able to gather enough of this fluid to detect it in the honey; but since coming to Florida I have noticed that some of my honey customers claim that from time to time they get honey which tastes like sorghum. Such customers always insist on tasting before they will buy the darker honey. They do not seem to object to the dark color if the flavor of the honey is all right.

After I had heard a few complaints of this sorghum taste, I made it a point to go to some of the larger cornfields here during the rainy season when the corn was making its most rapid growth, and again I heard the corn grow. In a few instances I watched some bees suck up the sap from these bursted stalks of corn.

I dare say that in some instances bees are able to gather sufficient amounts of this sap to taint or to impart an undesirable flavor to honey. I am of the opinion that only in times of a dearth of nectar do bees

find this sap. I should say that they would hardly search for it as they do for nectar in flowers. There would seem to be little or nothing to guide them to it.

National Honey Week in Portland

By Wesley Foster,
Oregon.

Under the direction of Prof. H. A. Scullen, secretary of the Oregon State Beekeepers' Association, Mrs. Florence Bennett, chairman of the Educational Committee of the State Association, L. M. White and S. D. Williams, local members who made local arrangements, Portland had the best Honey Week in its history.

Of course the coming on Wednesday, November 13th, of Mrs. Malitta F. Jensen was the big event and stimulated much of the activity.

The newspapers began with stories of bees and honey on Saturday, November 9th and The Oregonian, The Journal, The News-Telegram and Portland Shopping News all had items of lively interest.

The cooperation of the Oregonian and Journal, Portland's two largest dailies, was complete and satisfying. Hundreds of inches of space were given to honey and honey recipes, pictures, etc. If the space had been bought it would have cost above $1,000.

Mrs. Jensen was given time on KEX by Nancy Morris of the Oregonian in the morning and at 2 p.m. she broadcast over KOIN on Meier and Frank's hour appearing with Jeanette Cramer on her food broadcast. From 2:30 p.m. till after 4 p.m. she spoke and demonstrated at Elizabeth Reger's Cooking School (Portland Gas Company) at the Grand Central Public Market. About 200 listened and stayed. She was great in this as she was in all her work. The beekeepers were very highly pleased with Mrs. Jensen's work as well they might be.

In the evening at 7:30 Mrs. Jensen talked with the beekeepers on Honey Institute work and problems, and at this conference were five Washington beekeepers who had driven 200 miles to hear and meet her.

Many stores put on special displays of honey most noteworthy being Clyde Van Gorder's delicatessens in the Grand Central Public Market and the Great New Public Market. Mr. Van Gorder maintains the finest display of honey in all sizes and kinds of packages fifty-two weeks of the year and the consumer who visits his delicatessens can always find his favorite honey.

Meier and Frank, Portland's largest store, put in a large honey window, with hive bees and beekeeping equipment to show how honey is produced. It was educational in character. National Honey Week was featured.

Fred Meyer's Sixth Avenue Store had a live bee exhibit as well as a window full of honey and some information on bees and honey. National Honey Week was also played up. Both these windows were visited by thousands of people. The bee equipment was furnished by Williams Brothers Manufacturing Company, the bees by W. D. Haskell and the arrangements for the windows and collecting material by Wesley Foster.

Consumption of honey in Portland was stimulated by National Honey Week and we here in Portland believe that the American Honey Institute will be supported more adequately than in the past.

Brooklyn Company Guilty of Mislabeling Honey Shipment

An interstate shipment of honey by the Silver Label Products Company, Brooklyn, N. Y., was found by a Federal jury at Philadelphia, Pa., Friday, Nov. 8, to be adulterated and mislabed. Commercial invert sugar had been added. The Food and Drug Administration of the U. S. Department of Agriculture seized a shipment of this company's honey in Philadelphia, May 4, 1935. It was labeled, "Relco Brand Pure Honey—Quality Pack." Further actions against this company and other interstate shipments of their products are yet to be adjudicated.

Experts of the Department of Agriculture can readily detect the addition of small quantities of commercial invert sugar to honey. It changes the honey's color, turbity, and taste. Chemical components as ash, nitrogen, and the ratios of the several natural sugars are also changed.

Adulteration of honey has been a rare occurrence since the passage of the pure food law in 1906.

Bring Out the Honey

"When the late year wastes,
When night falls early and the moon is dulled
And the last warm days are over,
Unlock the store and to your table bring
Essence of every blossom of the spring.
And if, when wind has never ceased to blow
All night, you wake to roofs and trees becalmed
In level wastes of snow,
Bring out the lime-tree honey, the embalmed
Soul of lost July, or heather spiced,
Brown, gleaming comb wherein sleep crystallized
All the hot perfumes of the heathery slope,
And, tasting and remembering live in hope."

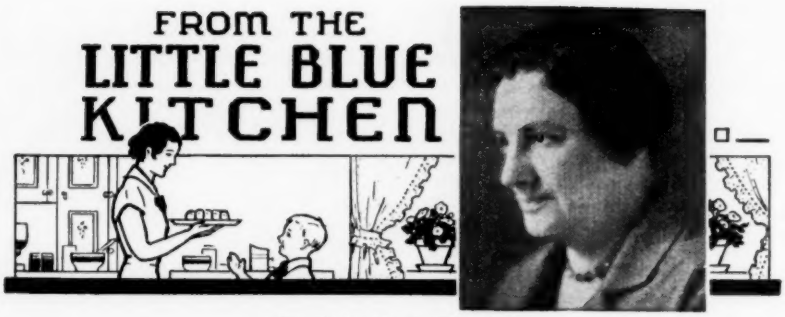
—Martin Armstrong.

(Clipping from I. L. Neill, Washington.)

The Birmingham Exhibit

MEMBERS of the Southern Conference put up this exhibit at Birmingham. The pyramid is conspicuous, always a good exhibit unit. The technique of exhibition is a fascinating study. And few exhibitors have the material to work with the beekeeper has.

FROM THE LITTLE BLUE KITCHEN



By Lida Keck-Wiggins.

DID you ever think how important the tops of things are, top o' the morning, for example, which I'm callin' to you now, and the ALMOST top o' the year as well. At all events, Honey Lady has been looking into the matter of toppings for foods, toppings made what the English call "quite topping" by being sweetened by the nectar of flowers. The recipes which follow are the result of an enchanting excursion into this field of meringues, icings, frostings and other top-pieces of various kinds.

And, because it's February, and hence a sort of in-between season, we'll start off with a delicious little thing called "Banana Float." You can make this by mashing with a broad tined fork three ripe bananas over which you pour the juice of one lemon and a cup of white sugar. Then you should take two cups of whipped cream sweetened with white clover honey. Portions of this are prepared by placing a few spoonfuls of the mixture in a serving glass to which orange juice sufficient to fill it are added.

So much for honey-top No. 1.

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Pumpkin pie being still in order, Honey Lady wants to call attention once again to the new way of serving which made this favorite pie even more popular. After having cut your pie into the desired number of pieces, drop a large spoonful of whipped cream on top of each and in the center of the oblong, or spoonshaped fluff place a teaspoonful of honey. The effect will be surprisingly like a "fried egg" sunny-side up, and the effect will be that the pie will be perfectly delicious. Try this on your family! You'll see!

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Apple Delight!

Then there's a third way in which honey may figure delightfully as a topper. Choose a rather deep baking dish. Cut good cooking apples into eighths. Place them upright around the edges of the baker. Then fill in the open space with more apple slices. When the dish is filled place a good-sized lump of butter in the center, sprinkle all with cinnamon or nutmeg, and pour in a scant half cup of water. Then over the top put a thick layer of granulated honey. Place in oven and let bake until apples are soft.

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Four-Fruit Honey Cream

And here is a frozen dessert in which four fruits easy to obtain in wintertime, are used.

3 oranges; 3 bananas; 3 cups water; 3 lemons; 3 cups of honey; 3 eggs; 1 small can grated pineapple (not the juice).

Mash bananas, add the eggs, well beaten, add the mixed pulp of the lemons and oranges, and the honey. Stir until as smooth as possible. Freeze like any other ice cream, or ices.

In making up this recipe you may use 2 oranges and 1 grapefruit if you like, but in that case use at least 1 tablespoonful **more** of honey.

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Now, for something more substantial, which Honey Lady feels sure will make good with the hearty eaters of the family! This is a honified recipe for sausage griddle cakes, and oh IS it good!

Take 2 cups of well sifted flour; 2 cups sweet milk; 3 teaspoonfuls baking powder; ½ teaspoonful of salt; 1 tablespoonful of honey; ½ pound loose sausage. Mix all thoroughly and bake on a hot griddle. If not sweet enough for any "sweet toothed" individual, honey may be poured on top of the cakes also.

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A Bee Line

If you are a victim of the prevailing cough-and-cold that has been going the rounds, a bee line to relief is through a tablespoonful of rich flavored honey. Some persons make a mixture of half-and-half orange juice or grapefruit juice and honey and that of course has an added value, but if seized with a coughing spell and only honey is at hand, take a big spoonful and find relief from that "tickling sensation" at once!

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Health Sandwich

A good sandwich for the children's lunch-basket can be made from minced ham, butter, sliced bananas and honey. First butter the bread; then spread with the ham; then the sliced bananas, mashed and sweetened with honey. This sandwich has much health value, being very nutritious as well as appetizing

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To the inquiry of a Blue Kitchen reader who asks what amount of honey should be used when sweetening cream for whipping, Honey Lady would say that she has found that to one cupful of cream two tablespoonfuls of honey should be added. This makes a wonderful topping for shortcakes of any kind, pies, or other pastries.

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Whipped cream, so sweetened, and added to cups of hot cocoa, proves a delicious asset to a perfect drink for cold nights, especially when one has been out to the movies, or a party, or is "just a wee bit hungry" at bedtime.

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Heart-shaped honey cookies or candies make delightful little "sweethearts" to serve at a St. Valentine's party.

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Did you ever try making Prune Whip with honey instead of sugar? Here's how Honey Lady once did it and found that the result was delicious. After cooking a cup of California prunes until tender, she added ¾ of a cup of nicely flavored honey, the well-beaten whites of two eggs. These ingredients were all whipped together until a smooth consistency was achieved. The blend was then turned into sherbet glasses, cooled and placed in the refrigerator until dinner time. Honey-sweet whipped cream topped off each glass. A rather plain cake (not too rich) should be served with this dessert as it is very rich itself.

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And as a final suggestion for the use of honey-sweet whipped cream, Honey Lady would pass along this recipe for a very dainty salad, the "makings" of which are available these days, and which is nice to serve with a dinner, at a party luncheon as the salad course, or by itself at a party where just a salad is being served. It might be called

Midwinter Salad.

1 pound white grapes
1 pound English walnut meats
1 pint crushed or diced pineapple
2 oranges
3 apples
3 dozen marshmallows
1 pint honey-sweetened whipped cream

Cut the marshmallows into cubes; let stand all night to dry. Seed the grapes, dice the pineapple, cut the grapes, walnuts, oranges and apples in small bits. Thoroughly blend in a mixing-bowl and let stand in refrigerator. Just before serving, place a portion on a crisp lettuce leaf and pile the whipped cream high on each.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

Filtering Process

I want information about the filtering process described by H. S. Paine and R. E. Lothrop, July. The cut on page 327 of the filter tank is 9x18 inches. I can have one made to hold 120 or 240 pounds of honey at one time. Will this work? I can make it with a water tank and gas burner. I want to use this for a mixing tank and filter.

KANSAS.

Answer (by H. S. Paine, Bureau of Chemistry and Soils).—The question indicates that you do not understand the purpose of the filter described in Fig. 1 of the article on the Filtration of Honey. The filter is for the purpose of preparing the filter aid, which is later mixed with the honey before it is filtered by means of the small filter press shown in Fig. 5a and 5b, July, American Bee Journal. In passing through the filter press the filter aid is removed and also extraneous matter and suspended particles. At no time is the filter (Fig. 1) used to filter the honey.

Number of Bees in the Honey Producing Hive

Now, most of the bee publications tell me that the same number of bees in two hives will gather less honey than the same number in one hive. Some even advocate shaking together strong colonies for the honeyflow.

Now, after getting this settled in my mind, feeling I have learned one of the principles, I find E. D. Townsend stating that other things being equal, a two-frame nucleus in proportion to the number of combs it contains will store just as much honey as a colony in an eight-frame hive, and considerably more than a colony in a ten-frame hive. Also the late Geo. Demuth intimated that there must be a limit to the number of bees which can be economically housed in one hive.

What am I to deduce from the above?

PENNSYLVANIA.

Answer.—Basically, all of this means the same thing. The less room bees have to store honey in the brood nest, the more they will put in the supers. That's all there is to it.

However, you can go haywire on this. Years ago, this idea drove beekeepers in Michigan to use such small hives that the bees were without winter stores and so died and for many years beekeeping in Michigan was in the doldrums because too small a hive was being used. Now the prevailing idea is to have a hive which will permit the production of as much brood as possible before the honeyflow, for comb honey at least, and as little room to store in the brood nest as possible during the honeyflow. In extracted honey production, this requisite does not obtain.

The Cause of Swarming

A certain writer insists that a super abundance of nurse bees is one of the big causes of swarming, and claims to have broken up the swarming impulse by giving a few frames of young brood to keep these nurse bees employed. Another writer breaks up swarming by shaking the bees into a practically empty hive for 24 hours and then takes away all the young brood and gives them only sealed brood.

What is the poor reader to get out of these two theories except a headache?

PENNSYLVANIA.

Answer.—Mr. Demuth years ago thought he had solved the question of swarming and described it in one phrase "A congested brood nest." He meant a brood nest out of balance in proportion of bees at different apiaries, crowded with nectar, congested with drones, hot, uncomfortable, in fact any condition which might bring about that actual congestion. Now it happens that both of the conditions you mention are connected with swarming. Any manipulation which tends to spread out the work of the colony so it is not all in one place reduces swarming. To give the nurse bees something to do will frequently help. Taking away sealed brood and giving open combs has the same effect.

On the other hand when a case of swarming is far advanced, to put the bees in a condition to which they would be if they had swarmed is a good practice so the writer who broke up the swarm by shaking the bees into an empty hive, taking away young brood and giving them only sealed brood has done just that. Because a swarm having left its hive will go to any new place without brood and a near approach is to give them only combs with sealed emerging brood. A perfect approach is to give them empty combs. This is often done.

Caucasian Bees and Foulbrood

Are Caucasian bees better to keep down American foulbrood than Italians?

WISCONSIN.

Answer.—It cannot safely be said that Caucasian bees are better than Italians to keep down American foulbrood. Perhaps Caucasians and other gray bees do not rob out weak and possibly diseased colonies as quickly as Italians. They may not be quite so apt to obtain disease because of this. There is no evidence of proof, however, that there is any considerable difference between the two races to this effect, as far as our experimental work has gone to date.

Granulated Honey in Winter

I went through eight colonies of bees December 8 and noticed that some of the honey in the brood chamber was granulating. What causes this? Will it make feed for the bees this winter?

Here in western Missouri in 1935, we had a very wet spring and early summer, then when it quit raining it stopped in earnest and it became just as dry as it had been wet. About the last week in August, it started raining and all the surplus the bees made, together with that in the brood chamber, was made in September and October. Our killing frost was October 24th. My bees have plenty of honey to carry them through if it only can be used. What about it?

MISSOURI.

Answer.—I do not think you need to worry about the granulation. Once in a while honey granulates solidly in the brood chamber and in the winter, bees of course, may freeze down on it and starve. This happens seldom, however.

In most cases of granulation in the comb, the solid praticles are mixed with sufficient liquid so that the bees are able to use a large portion of the honey, leaving only the partially dry granules.

Filtering Honey from Few Colonies

How can I best filter my honey since I expect to have only four or five colonies? I cannot afford a big filter and yet I want what honey I do sell to be A No. 1.

WISCONSIN.

Answer.—When your honey is extracted, run it into a tall settling tank where it can stand until all separation possible has occurred and the honey has cleared itself by gravity of wax particles. The top of the tank should be provided with one or two thicknesses of cheesecloth so when the honey runs into it from the extractor, the coarsest particles will be taken out.

Let the honey stand several days in the settling tank, then run it into a second tank where it may be heated in a hot water bath or in water heated by steam. Do not apply the heat directly to the honey and do not allow the temperature of the honey to get above 120. Leave it there several hours.

Now run the honey directly out of this tank through two or three thicknesses of fine cheesecloth back into the original tank which in the meantime you have cleaned out thoroughly. After it has stood twenty-four hours in this tank it may be run directly into containers. This is as clean as you can get it by ordinary methods.

Illinois Meeting

The Forty-fifth Annual Convention of the Illinois State Beekeepers' Association was held at the St. Nicholas Hotel in Springfield, Illinois, on October 25 and 26. Included in the program were out of state speakers; L. R. Stewart of Newport, Indiana; M. J. Deyell of the A. I. Root Company, Medina, Ohio. A feature of the convention was the part taken in the one day's program by the Women's Auxiliaries of the Illinois Honey Foundation.

Mrs. Malitta F. Jensen, representing the American Honey Institute, gave two wonderful addresses on the Institute and what it has accomplished and was followed by reports by different hostesses of the Illinois Honey Foundation which has been doing some good work in Illinois under the leadership of Mrs. C. L. Duax in co-operation with American Honey Institute.

Other addresses given were by State Inspector C. L. Duax, M. G. Dadant, William Osburn, Frank C. Pellett, V. G. Milum and Mrs. S. F. Claussen. There were the usual reports of the officers of the Association.

The banquet on Friday evening was attended by some 100 guests among whom were Governor Henry Horner of Illinois who delivered a short address to those present. Optimism seemed to prevail among the beekeepers for 1936 although the honey crop throughout the state has been relatively small during 1935.

Report of Apiculture Section Meeting, St. Louis

By Roy A. Grout,
Illinois.

THE Forty-eighth Annual Meeting of the American Association of Economic Entomologists was held in St. Louis, Missouri, December 30 to January 1. This meeting was held in conjunction with the American Association for the Advancement of Science. The entire meeting was a very large one and it was estimated that there were 3,500 scientists in attendance reporting on 1,200 papers. In the Association of Economic Entomologists, there were somewhere around 200 to 300 in attendance and at the session on apiculture, there were from 20 to 30 present during the meeting. George H. Rea was Chairman of this session, W. A. Price, Secretary. The newly elected officers are W. J. Nolan, Chairman, and there was no change in the secretaryship.

Geo. H. Rea read the chairman's address "Fundamental Principles and Practices in Extension Apiculture." This was a very comprehensive review of extension practices and methods. He stated that there should be a very close cooperation and affiliation between the inspection department and the extension department of a state. However, the extension department should not have to do any of the inspection work. To raise funds for work of this type, the state of New York has been able to work out a system whereby the county puts up say $500 with the state donating $1,000. This method is certain to bring about a cooperation between state officials and county officials. Prof. Rea pointed out that the work of the extension department should in a large way be towards the general public, stressing the importance of the honeybee as a pollinator and educating the public to the use of honey.

E. Oertel of Washington, D. C., discussed "Honey Flow from Palmetto in Louisiana." He stated that palmetto honey was a fine grade of honey, being judged from white to extra white in quality. He traced the relationship between maximum and minimum temperature and honeyflow for three different seasons. He found a very high correlation between minimum temperature and yield but failed to find much of a correlation between maximum temperature and average colony gain.

Roy A. Grout of Hamilton, Illinois, discussed "Relation of Size of Brood Cell to the Size and Variability of the Honeybee." This was a statistical study of five characters of the bee as influenced by its rearing in the standard size of foundation, that having 857 cells to the square decimeter and two larger sizes which approximate those being offered for sale in Europe today. It was concluded that while the size of brood cell affects the size of the honeybee and that significantly larger bees are obtained through the use of large cell foundation, that in reality the bee is not much larger, being only from 2 to 2½ per cent larger in its linear measurements. Breeding and selection of honeybees should accomplish marked results in comparison.

Mykola Haydak, St. Paul, Minnesota, talked on "The Value of Foods Other Than Pollen in the Nutrition of the Honeybee." Of the various pollen substitutes with which he has experimented cottonseed meal, meat scraps and commercial casein gave best results. He mentioned that possibly one part commercial casein and nine parts of cottonseed meal would be better for the purpose. He also told an interesting fact that the adult worker bee emerging from the cell grows after it supposedly has become an adult bee.

J. E. Eckert and H. W. Allinger of Davis, California, reported on "Further Observations on Airplane Dusting and Its Relation to Beekeeping." Dr. Eckert presented the paper These were the results of two years' experience with airplane dusting, using heavy dosages of calcium arsenate on tomatoes in the vicinity of Davis, California. This dusting is done by commercial concerns with no control or inspection whatever. Consequently, there is a resulting apprehension of the general public and home owners as well as cattle men, dairy men and beekeepers. The keeping of bees in such areas is doomed. One beekeeper estimated his loss for the season to be $3,000. The practice is also endangering the lives of dairy cattle and is, of course, a public menace and steps are being taken to bring the situation under control or inspection.

The symptoms of this type of poisoning in regard to the honeybee are that early in the morning at the break of dawn, the bees gather at the entrance of the hive, begin to hop and crawl and attempt to fly. They cannot, however, fly and soon fall off in various directions and disappear. Other bees undoubtedly become stupified in the fields and consequently are lost. In addition to this, nurse bees have been observed to attempt to put out of the hives stupified bees.

Dr. Eckert also reported on "Observations on the Preparation, Shipment and Installation of Package Bees." This work was carried on at Davis, California, and one of the principal things obtained was the temperature recording of bees to climatic conditions while being shipped from Davis, California, to Canada.

The queens which were enclosed in dry cages shipped best. The practice in caging the queens was to put the queen in the cage and then to place a handful of bees over the cage. In this manner the queens were kept warm and were taken care of. The same handful of bees was allowed to remain on the cage as it was placed in the package. He found that the queens and bees in Canada were exposed to extreme cold and severe weather. This was true in spite of the fact that proper precautions were taken. Later laboratory tests on the effect of cold temperatures upon queens showed that when queens were exposed to a temperature of 3[illegible] degrees for a period of one-half hour up to five hours, that they were superseded readily. Over that length of time, the queens produced bees which were abnormal in the various organs of the head, some having one antenna or no antenna or lacking one mandible, lacking one eye, etc. After an extended period of exposure to this cold, the queens did not produce at all. Dr. Eckert advanced this as a possible cause for supersedure of queens in package bees.

Dr. O. W. Park, Ames, Iowa, discussed testing for resistance to American foulbrood. This was a report on tests made on 31 colonies representing various strains from three races of bees and appeared in the January issue of the American Bee Journal.

F. B. Paddock of Ames, Iowa, discussed the place of beekeeping in relation to agriculture today. Prof. Paddock showed that intensive agriculture has resulted in a decline in honey production. He stated, however, that agriculture is now in a period of reconstruction where among other things, the planting of legumes and increase in stock production are encouraged. The growers of crops such as alsike clover, sweet clover, Dutch clover and even red clover do not appreciate the value of bees as an aid in seed production. He concluded that in this increased program of greater legume production and stock production, bees would be needed as an agent in seed production.

"Laboratory and Field Tests of Chlorine Treatment of Honey Combs" was a paper presented by John D. Hitchcock of St. Paul, Minnesota.

Meeting and Events

(Continued from page 70)

write Mr. Weatherford at Vernon Hill, Va. The reliability of applicants will be investigated before listings are permitted.

The Virginia Association again moved to formally invite the American Honey Producers' League, American Honey Institute, and Southern States Beekeepers' Federation to come to Lynchburg for their next joint meeting following the 1936 San Antonio meet.

Mr. James Vinson, having initiated activity into the Virginia Association during his four years as president declined to accept renomination. Virginia's largest beekeeper, Mr. T. C. Asher, Brookneal, Va., was elected president; Mr. W. A. Caldwell, Galts Mill, Va., secretary-treasurer; and Mr. J. L. Winebarger, vice president. The executive committee elected are: Henry W. Weatherford, J. Phillip Vinson, H. P. Pleasants, A. J. Zastrow, Harry Fariss. The committee includes all officers and meets when necessary to consider important business on order of the President. This committee is authorized to transact any business that may be necessary between regular meetings and is the active element behind the organization.

The writer was requested to see that association news is furnished journals at necessary intervals. This responsibility was accepted only on condition that other members assist. Contributing news in readable form is a profession permitting success with ease if one's vocabulary is akin to Shakespeare's or Webster's. We lost such a character in the late John H. Protheroe to whose memory high tribute was paid by our entire membership. I would it were possible to bequeath such gifts and that I could have been Sir John's beneficiary.

A. D. Hiett.

Bears Do Like Honey

On page 486 Mr. Pearcey raises the question as to whether bears are fond of honey or not. It is quite possible bears prefer brood to honey, but that in no way denies their fondness for honey.

Some thirty years ago I attended a poultry show in Boston and took along honey to my brother who was showing his Barred Rocks. There was a young bear in the cage there. I offered a chunk of comb honey to him and he grabbed it eagerly, laid it on top of one of his paws and ate it as a child would eat candy. Later on as I passed the cage, the bear was on the alert for more honey.

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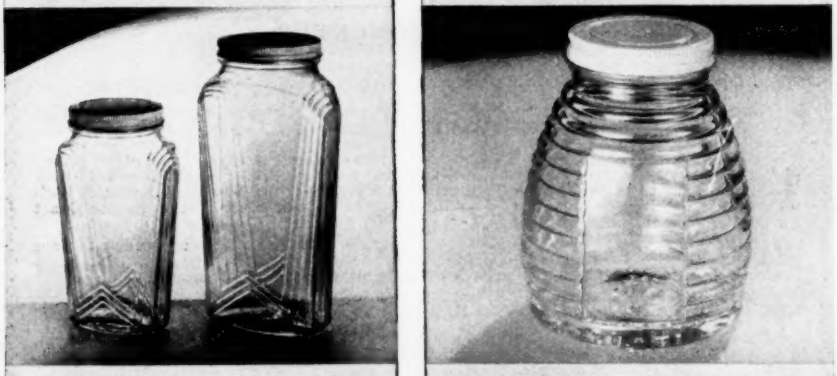

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Crop and Market Report

Compiled by M. G. Dadant.

For our February Crop and Market page, we asked reporters to answer the following questions:

1. How is honey moving?
2. How much left on hand in your territory?
3. Are jobbing prices advanced over a month ago?

How Is Honey Demand?

Usually following the Christmas season, the demand for honey slumps off very materially. The same is the case now. However, we believe that the proportionate slump is not nearly so bad this year as it has been in the past two or three years. Only a very few reporters stated that honey was moving extremely slowly. The bulk of them stated that there was a fair movement and quite a large sprinkling that the movement was good to extra good. Good sales of honey existed throughout the East and Southeast, with the latter movement particularly reported in the central western states and the intermountain territory with a heavier demand along the Pacific Coast.

Honey on Hand

As we have stated in our previous issue, the quantity of honey on hand is not very excessive. An increasing number of reporters stated that beekeepers were out of honey and trying to purchase locally, without any great results. Carloads of honey are still available, but we believe that the amount which could be purchased in this fashion is rapidly being reduced. Likely most of the honey now available would be in less than carload lots. The eastern states report only 5 to 10 per cent of the total crop left on hand, with quantities of California and western honeys coming in to take up the slack.

The central western states perhaps account for the largest volume of honey still on hand on account of the excessive crop of fall honey this year.

In the intermountain states we find the demand fairly light and quite a considerable amount of L. C. L. honey still on hand.

It is in California, however, that the largest change has taken place. While California had excessive stocks one and two months ago, the stocks seem to have been readily cleaned up and now the amount available in carloads is very much reduced and the price has stiffened. In fact most of the honey still held in California hands is held for local consumption or else at a much higher price range than the bulk of the crop which moved earlier.

Retail Advances

In practically all instances reporters state that there have been very few retail advances in honey, and it is apparent that beekeepers are trying to maintain about the price at which the market started last fall. In many instances, however, replacement stocks of honey have cost more and this has necessitated an advance in price, which, in most instances, has met with very little opposition on the part of the consumer. We do, however, hear from several reporters that an advance in honey has meant that the demand slacked up appreciably and perhaps we have somewhere near reached the price saturation point unless the general price level advances in all groups.

Advance in Jobbing Prices

With very few exceptions, we learn that the jobbing demand has advanced and the price has materially stiffened with an attitude on the part of the packers of honey that they cannot pay above a certain price without killing their chances for a maximum volume of honey. As we have stated many times in the past, there is a point above which honey should not go without making a reduced demand owing to the fact that people will go to other sweets instead. This is true even in the bakery trade and a few complaints have come in that bakers are changing over on account of additional price of honey. In other words, when we get above a certain point, then it is possible that bakers would change over to some other sweet even in view of all of the publicity that the American Honey Institute has given them and even in view of the fact that honey is undoubtedly better for them than some other sweetening agent.

Will Honey All Move?

Without a single exception, beekeepers stated that honey would all move before the new crop is available. One restriction is, however, that some beekeepers who are asking an abnormally high price may have difficulty in moving at the price they ask. This, of course, will be the fault of the beekeeper rather than the market.

Mr. Harold J. Clay, in one of his latest reports, has intimated that there is plenty of honey if beekeepers will only find it and keep their local markets supplied. This is a truth which should be brought home to you beekeepers who have run out of a local supply of honey. Unless such action is taken on the part of the beekeepers to give a continuous source of supply to their customers, the consumer turns to some other sweet.

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SAVE QUEENS. Safin cages now 15c. Ten for $1.00.
Allen Latham, Norwichtown, Connecticut.

DIFFERENT, that's all. Written and published for the instruction of beekeepers. 52 pages of breezy entertaining beekeeping comment each month. One year, $1.00; two years, $1.50. Sample, 3c stamp.
The Beekeepers Item, San Antonio, Texas.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices.
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YOUR WAX WORKED into plain medium brood foundation for 15c pound; thin super, 22c. Fred Peterson, Alden, Iowa.

QUALITY BEE SUPPLIES. Prompt shipment. Reasonable prices. We take honey and beeswax in trade for bee supplies.
The Hubbard Apiaries, Onsted, Michigan.

FOR SALE—Comb foundation at reduced prices. Plain, wired and thin section. Wax worked at lowest rates.
E. S. Robinson, Mayville, N. Y.

DAIRY GOATS

DAIRY GOAT JOURNAL, Dept. 601, Fairbury, Nebraska. Monthly magazine, 25c yearly, 5 months 10c.

MISCELLANEOUS

BOOK BARGAIN—Very slightly damaged copies of Beekeeping in the South by Kenneth Hawkins, cloth bound, published to sell at $1.25, price postpaid only 29 cents.
American Bee Journal, Hamilton, Ill.

Do You Want Bees?
Do You Want Live Delivery?
Do You Want Your Bees on Time?

Merrill's Quality Bees and Queens will suit you, then. Few losses in transit. We have shipped many thousand packages and queens.

★ ★

Mississippi's Oldest Shippers

★ ★

PRICES

Two-Pound Package, with queen	**$2.45**
Three-Pound Package, with queen	**3.15**
Select Queens, each	**.75**

15% Discount to Dealers
Under Trade Agreement

★ ★

MERRILL BEE COMPANY
BUCKATUNNA, MISSISSIPPI

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— from —
CHICAGO

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CONSTANTLY TO THE NEEDS OF BEEKEEPERS

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Let us quote on your list of supplies. Root 1936 bee-supply catalog is free. A post card request will bring it.

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224 WEST HURON STREET
CHICAGO, ILL.

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We are prepared for greatly increased production and better service than ever before.

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Ready for you. Young Italian Queens. Vigorous Young Worker Bees which have done no work when you get them. Any Size Combless Packages—Anytime—From first of April to the end of May. The Five-pound Orchard Package is our specialty.

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PRICES FOR APRIL AND MAY

Five-pound Combless Orchard Pkg. with Queen, each	**$4.55**
Four-pound Combless Package with Queen, each	**3.85**
Three-pound Combless Package with Queen, each	**3.15**
Two-pound Combless Package with Queen, each	**2.45**

For any size package without queen, deduct 75c

Payment any time before shipping date. Dealers' terms on application.

MORLEY PETTIT, Albany, Ga.

Standard Lumber Co.

Bargains in surplus stock subject to prior sale:

8-fr. Hives, complete with metal roof and inner covers, package 5	$9.00
8-fr. Hives, complete with wood covers, pkg. 5	8.00
8-fr. Bodies with frames, pkg. 5	4.00
8-fr. Bodies empty, without frames, pkg. 5	2.40
8-fr. Extracting Supers, with shallow frames, pkg. 5	2.50
10-fr. Extracting Supers, with shallow frames, pkg. 5	3.50
8-fr. Wood and Zinc Excluders, each	.22
Alexander Feeders with metal pans, each	.20
Mosquito Bar Veils, each	.15
Metal Frame Shoulders, per 100	.20
27-lb. Med. Brood Wired Foundation 4⅛x16½, per lb.	.45
40-lb. Med. Brood Wired Foundation 4 9-16 x 16¾, lb.	.45
10-lb. Med. Brood Wired Foundation 8⅛x16¾, per lb.	.45

All above is regular stock from G. B. Lewis Company and Dadant & Sons. Mention this ad when ordering.

STANDARD LUMBER CO.
P. O. BOX 477, WINONA, MINN.

ADVERTISING PAGES REMOVED

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

The Lower Rio Grande Valley at the south tip of Texas is the southernmost portion of the United States excepting only the islands off the south coast of Florida. Here flowers bloom all winter and farmers are active in their fields at all seasons. Citrus fruits and winter vegetables are the principal crops of the valley. Few plants familiar to a man from the North are to be seen. Instead of apples, peaches and plums one sees orange trees, date palms, papayas, bananas and loquats.

— : —

While there is something for the bees at every season, they do have a brief dormant period in December when brood rearing practically ceases. The cool nights are unfavorable for colony expansion but even then one is likely to find some brood in most of the hives. A light honeyflow usually comes in early January when brood rearing starts again in earnest and in February the citrus trees bloom and a honey crop is harvested in favorable seasons.

— : —

While the valley is not a dependable place for large crops of honey it is one of the most favorable in the United States for early increase. Every year more northern beekeepers come south for the winter months and an increasing number are making their own increase instead of buying. One wonders whether they would not do as well to contract with some established shipper for package bees to be delivered at the proper time. However, restless men must have something to do and this keeps them occupied whether or not it proves profitable.

— : —

Perhaps that blue-flowered sweet clover **(Trigonella)** may yet prove valuable in some parts of the country. Harvey Said, of Pueblo, Colorado, writes that for him it bloomed for six or seven weeks and the bees worked it freely. He secured nearly a quart of clean seed from the plants grown from the small sample of seed sent him. Frank Derrenbacker, Jr., of Buckingham County, Virginia, also reports that the bees worked it in his garden from early morning until dark. We are pleased to hear from so many beekeepers who will try it again next year.

— : —

Along the highways one sees numerous roadside stands where fruits are on sale but one seldom sees honey at the stands in this valley. In Florida one sees honey on hundreds of stands. Surely the beemen are overlooking something in the winter tourist trade. The number of tourists, however, is much smaller than one sees in either California or Florida.

— : —

George F. Rosencrance, formerly of South Dakota, is an active beeman living here at Waslaco. Although eighty years of age he still keeps busy with the bees and the garden. He seems hale and hearty and enjoys the mild climate which enables an old man to live a happy life in the open air long after he would be unequal to the severity of the northern winters.

— : —

Judging from all the reports of his numerous activities one would judge that we have been misspelling Russell Kelty's name. It would seem that "Rustle" must be the correct interpretation or "Rustler."

— : —

For some years Wm. Mosteller, of Casper, Wyoming, has been having mysterious losses among his bees. There were indications of poisoning but the usual sources of poison were lacking. After much confusion and long search it begins to appear that the presence of selenium in the soil which is absorbed by the plants on which the bees work, may be the cause. This may explain the death of bees in many other western localities. It is hoped that all the facts will soon be known.

Asberry Singleton, of Gladstone, Manitoba, calls attention to a weed which is very attractive to the bees. It is leafy spurge, a deep rooted milkweed which does not spread rapidly, but once established crowds out other vegetation and is very difficult to eradicate.

He says that the bees seem to prefer it to any other bloom. It is fortunate that such weeds have the one redeeming quality of providing bee pasture. There are a number of good honey plants among the bad weeds.

— : —

Singleton reports that the blue-flowered sweet clover grew well and bloomed profusely, but that the bees paid no attention to the early crop with him. The last of July he cut some of it down to about six inches of the ground. It grew again into bushy plants and bloomed as freely as before. The bees worked the second bloom freely until frost killed the plants. Such reports indicate that under favorable conditions this plant may be of real value. We must learn how to use it.

— : —

Dr. N. E. Hansen, of Brookings, South Dakota, has made several trips to Russia as a plant explorer. From a recent trip he brought back hardy apricots from a region where winter temperature drops to fifty degrees below zero. A heavy crop was produced last summer in South Dakota and it is expected that apricots can soon be grown anywhere in the cold Northwest. He writes me that they are of good size and quality.

Dr. Hansen has an interesting story of the bees in a mountain valley which he visited where red clover is the source of most of the honey.

— : —

Fifty below sounds cold down here in South Texas where we have seen no frost so far this winter. Reading of zero temperatures at home helps one to appreciate a winter among the orange groves. On Christmas day the bees were busy on Turk's Cap Mallow. Brood rearing was well advanced in spite of some chilly weather.

— : —

Everywhere in this south Texas town the poinsettias are in bloom. It is hard to realize that it is winter with so many flowers. The poinsettia has very large nectaries and the nectar accumulates in big drops so that at times a bee can fill her honeysac to capacity from one flower. Since the bees get pollen also there is considerable winter forage for the bees in the valley towns. Poinsettia does not always yield nectar, however.

— : —

John Jessup received the surprise of his life at the close of the convention of the Iowa Beekeepers Association. John was a member of the nominating committee, but no agreement had been reached for a recommendation for president when he found it necessary to leave for home. After his departure the remaining members decided to recommend Jessup for the place. Accordingly John Jessup was elected with enthusiasm and it is easy to imagine his surprise when he heard the result of the balloting. Congratulations, old man, Iowa beekeepers appreciate your long and loyal service.

— : —

Broccoli is an important crop in the winter garden area of south Texas. Since it is cut for market it but seldom is permitted to bloom. When the plant does bloom, however, it is covered with bees and were these big fields grown for seed instead of for food there would be some wonderful bee pasture in the broccoli fields. There are many good honey plants in the genus Brassica including cabbage, mustard, rape, etc. Unfortunately for the bees, the purposes for which they are grown too often cuts them down before flowering.

FRANK C. PELLETT.

1

Our Italian Queens are the best that money will buy. We spare no expense in rearing our queens, personal care and utmost pains are used in every detail. We know good queens are the secret of your success and our success.

2

Our Package Bees are not just ordinary bees. They are bred to satisfy the man who wants the Best. They are Young, Gentle, Uniform and Full of Pep. We have been shipping package bees many, many years. We know how.

3

Our Policy to make every one a satisfied customer, regardless of the size of your order. Our business shows a steady year by year growth, built on a policy of "Quality and Service First."

Our catalog is full of information, "How to Install Package Bees Successfully," etc., a postcard will bring free copy by return mail.

THOS. C. BURLESON CO.

COLUSA - - - - - - - - - - CALIFORNIA

Louisiana Comb Shippers and Honey Producers' Association

An Independent Beekeepers' Organization—Neither Controlled Nor Affiliated With Any So-Called National or State Organization.

Organized by Straight Package Shippers for a Better Understanding With Package Buyers.

Since package bee shipping first started it has been an established fact that bees on natural combs of honey with the queen loose and laying among them, with brood in all stages, shipped better, handled and transferred better, get off to a better start and put up more honey than any other way in which bees can be handled.

It eliminates all trouble in installing in the hives, as the combs have only to be lifted over. Also, through a flight hole in the package, they can be loosed, let fly, and then settle down before transferring. It removes all danger of queen introduction, practically all loss in transit and most of the trouble with supersedure.

It is ideal for orchard pollination since it can be opened and set under the trees. The extra honey it carries takes care of variation in bloom period. The laying queen demands pollen for which the heavy force of mature bees readily search among the fruit blossoms.

This section of Louisiana is ideal for comb building, with its heavy, long drawn out honeyflows and its mild climate. And every member of this Association is a honey producer. We keep bees to store honey not just to sell. Let us ship them to you as they come from our hives on their own combs to store honey for you.

We have tried patiently for years to get the value of this type of package recognized by state, regional and national organizations but finally gave it up and organized a cooperative of our own. We have taken the "Code" two-pound package as a basis and worked out the following attractive options:

Two pounds with untested queen, shipped either on can of sugar syrup or on a standard comb of natural honey with emerging brood, or on Modified Dadant combs.

Sugar syrup package with cage queen, or comb package with queen loose and laying on comb. The latter to be bored for flight for orchard pollinating.

Extra pound of bees or extra combs can be bought to build up any size package desired by shipper, at the same price each, per pound or per comb.

Our prices as per code are: Two pounds of bees with untested queen until June 1st, $2.45 each f.o.b. Extra pounds of bees (at code price) or extra combs to build these to any size, 70c each. Extra queens, 75c each (code price). Two pounds, and two combs at $3.15 each is the best buy. Approved dealers write for discounts allowed by code.

Just a word about "Comb Packages." This is the up-to-date, easy handling, balanced package in which this Association is specializing. It is in no way to be confused with the old out-of-date and unpopular "Nucleus Package" as listed and so named by the Code authorities. If you want nuclei packages, apply to those advertising them.

One-fifth books order. All packages with Inspection Certificates attached. Thousands of colonies to draw from. Satisfaction guaranteed.

Supply of Modified Dadant Combs limited and only for later shipments.

Packages obtainable from following alphabetically listed shippers, at addresses given:

R. L. BERNELL, Route 4, New Orleans, Louisiana.
E. J. BORDELON, 2651 Havana St., New Orleans, La.
JES DALTON, Kenner, Louisiana.
EPHARDT'S HONEY FARMS, Luling, Louisiana.
J. L. GASPARD, Hessmer, Louisiana.
RED STICK APIARIES, P. O., Montegut; Teleg. Houma.
Combless Packages Preferred. Dealers & Mfg. Beekeeping Supplies.
ISAAC ROY, Hessmer, Louisiana.
MOORE ROY, Hessmer, Louisiana.
NORMA E. ROY, Hessmer, Louisiana.
WILLIE ROY, Hessmer, Louisiana.

All Modified Dadant Combs built on Dadant's Crimp-Wired Foundation. Packages with queen laying and brood emerging may be shipped three weeks later than combless packages and still get an even start.

A check up on advertisers shows this organization has two out of every three package shippers in Louisiana. Why not try an order where the majority are advertising?

No representative has authority to speak for this Association at any place or meeting, on any subject, without first showing credentials signed by the Executive Committee of this organization.

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The Oldest Bee Journal in the English Language

The American Bee Journal

ESTABLISHED BY SAMUEL WAGNER IN 1861

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